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JULY MCMXIV

Vol. 21

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Vol. 21. No. 7 JULY, 1914

Is Alkaloidal Therapy On A Sound Basis?

WE WERE under the impression that, so far as this rather threadbare question is concerned, the war was over. We were congratulating ourselves that the time and energy and ammunition we had been obliged to expend each year in fighting for position in this matter could now be utilized in more profitable directions.

We had observed with some satisfaction (and a little pride) that even the heavy guns of the ultraconservatives in this country and Europe were capitulating and coming over to our side, and had breathed a sigh of relief—not so much for the cessation of hostilities themselves (for we rather love a scrap when we know we are right) as because it released that much of our forces for more urgent action elsewhere; and besides, any war becomes a trifle tedious after the end is once in sight.

It seems, however, that there are still some "snipers" in the field who cannot resist taking a desultory pot-shot at a victorious cause; and, trivial as this petty sniping may be, it is a hindrance and an annoyance, and gives the impression of incomplete conquest, and so it has to be silenced.

Thus, *The Therapeutic Digest*, in its May issue, breaks out with the impressive question: Do the alkaloids represent in any full measure the therapeutic equivalent of the drug?

The freshness pertains only to the outbreak, and the impressiveness only to the manner of the inquiry. As to the question itself, our contemporary must have been prowling around some old battlefield, baptized very early in the campaign, and picked up a worn and spent bullet, with which to prime its belated gun. Our friend reopens an antiquated argument that no one is using these days because it has long since been shown to have nothing to do with the alkaloidal principle at all.

It is amusing to note, by the way, *The Therapeutic Digest's* eager insistence that it is speaking, of course, of the fresh drug, because many of our most valuable remedies lose much of their virtue by evaporation, so that the alkaloid, *being of a stable character*, is all that is left to represent its therapeutic activity; apparently unconscious that it has inferentially conceded one of the strongest arguments in favor of alkaloidal pharmacology.

But to come back to *The Therapeutic Digest's* main point. It punctures the entire alkaloidal bubble with the off-hand assertion that the alkaloid and the whole drug are two entirely different things. Why, bless our

unsophisticated soul, so they are! How could we ever have been so pharmacologically blind as to imagine that in strychnine we were exhibiting the pharmacological principle of nux vomica, or that the one could be properly employed on therapeutic indications worked out from experimental data in the use of the other? What could we have been dreaming about to delude ourselves with the idea that morphine was the epitome of opium and could be depended upon to do the same clinical work?

The funny thing about it is that we never did think such foolishness, and certainly never taught it. A still funnier thing is that the galenists, who use this straw argument against the alkaloids, did and do standardize their whole drugs on these partial ingredients, as though they actually did represent all the pharmacological activity of the drug. It is no part of alkaloidal therapy whatever to pretend that the alkaloid is therapeutically identical with its parent drug; or even to contend that it can replace the parent drug. But it does insist that, where you use the parent drug avowedly for the action of this or that alkaloid which it contains, it is far more scientific and satisfactory to extract the alkaloid first, and give it for its own unmodified action.

It further insists that a very large proportion of whole drugs *are* thus used for the action of one of their alkaloids—are, in fact, as we have pointed out, standardized on their content of that alkaloid, regardless of the several other medicinal principles mixed in with the alkaloid, compromising and often antagonizing its action, which is very slipshod and unscientific, to say the least.

It still further contends that the isolated alkaloids, in virtue of their own definite therapeutic indications (not confounding them with those of their parent drugs) will cover a large part of the therapeutic field in a better, more effectual and more dependable way than the whole drugs—not all the field, but a large part of it. Wherever these conditions obtain that we have just cited—and what physician will be bold enough to deny their wide prevalence—alkaloidal therapy asserts its claim to those superiorities which our critic confesses it would possess *if*—etc., etc.

So, dear *Therapeutic Digest*, it turns out that all the inconsistencies, all the sophistries, all the contradictions, are on the side of the dyed-in-the-wool galenists. Nay it is they who are sectarians, not we. For we have done nothing more than to discern the inconsistencies and paradoxes of old-line therapy, and have furnished the means for eliminating them, while still recognizing and utilizing all that is right and good in the galenics. Although we have been using the term "alkaloidal therapy," because our critic used it, the fact is there really is no such thing as alkaloidal *therapy*. It is not a matter of therapy but of pharmacology. Its essential informing motif is the furnishing and proper utilization of therapeutic *agents* of the highest degree of purity and efficiency, for carrying out all that is best in current therapeutic science. These agents do not pretend to represent their parent drugs (except in so far as the parent drugs falsely pretend to represent them) or any other drugs. They represent themselves.

Active-principle pharmacology antagonizes nothing in all the broad field of current medicine, either in theory or in practice. It sets up no strange therapeutic gods, no new therapeutic law. It pretends to no therapeutic prescience. It exaggerates nothing, belittles nothing, not even the galenic drugs. Its object is to make of drug therapy a definite, scientific practice, worthy to take its place alongside all the other twentieth-century refinements which go to make of modern medicine a more and more exact science.

He who purposes to study medicine should have in high degree three gifts, not one of which is common among mankind, yet all of which he must have: the power of reliable observation, intellectual endurance, and loyalty.—Charles S. Minot.

THE FATALITIES FROM SALVARSAN

The eight deaths following the untradural administration of neosalvarsan-serum for nerve syphilis in one hospital in Los Angeles, all occurring within forty-eight hours, have brought home to the medical profession more strikingly then ever before the fact that salvarsan is not alone a useful drug, but a dangerous one as well. At least 275 deaths are known to have followed its administration, while in all probability the total number is several times this, since nearly every physician can tell of cases which have not been reported.

In a recent book upon the subject, Wechselmann brings out the important point that very many of these deaths from salvarsan may be attributed to the combined or alternated use of salvarsan and mercury. He declares that anything delaying the excretion of an arsenical preparation brings out the

toxic action of that drug and may cause a fatal issue. For this reason, he strongly advises against administering salvarsan *following* the giving of mercury, and especially of metallic mercury, inasmuch as the latter drug interferes with normal kidney function and thereby delays excretion.

The moral of his observation is, that before using salvarsan a careful chemical and microscopical examination of the urine should be made in every instance. Also, salvarsan and mercury in large dosage should never be employed together. And, finally, when the combined treatment seems to be indicated, the arsenical preparation always should be given first, and never, under any circumstance, after a course of treatment with a mercurial.

There is no denying the value of salvarsan, and we have no disposition to minimize the importance of Ehrlich's great discovery. Yet time has only served to teach the thoughtful physician caution in the use of this remedy, the injudicious administration of which we now know to be fraught with dangers little dreamed of by the average physician. Mercury still stands first as a specific remedy for syphilis. Not only is it safe; but its curative value is undoubtedly greater than that of salvarsan. The latter drug has its own place—but, for the present, it may well be left to men who are thoroughly familiar with its field and know best how to use it.

He who goes safely will go far. Our advice to the general practitioner is, Keep in mind that popular maxim, "safety first," even in treating syphilis.

The longer I live the more my mind dwells upon the beauty and the wonder of the world. I hardly know which feeling leads, wonderment or admiration.

—John Burroughs.

SOCIAL SERVICE FOR THE SICK

The French journals are discussing with approval Cabot's institution of a social service in the Massachusetts General Hospital. The attention of the entire staff has been centered upon the diagnosis and etiology; but the justification of all this preliminary work, says Mme. Nageotte Wilbouchewitch (*Ann. d. Méd. et Chir. Infant.*, Apr. 15), is the treatment. Yet, truly, in a considerable number of instances the physician finds himself powerless.

It is easy to tear off a leaf from a block and give it to a diabetic for his regimen, to order an anemic child to another climate, or a backward boy to a special school, or to direct a young man to abandon his work; but how can these things be done when neither patient nor doctor knows how? Somebody else must see that the doctor's orders are executed—he himself has not the time.

To meet this difficulty, Cabot created a social service, the essential role of which is, to apply the treatment prescribed by the physician, to overcome the obstacles and preserve the benefits. He had difficulty in persuading his colleagues that this, though desirable, was feasible. The hospital administration permitted Cabot to engage at his own expense the first employee. This was Miss Pelton, a woman of large heart, habituated to the sick, familiar with misery and the work of benevolence. A quarter of an hour after her installation a doctor asked her to see to the alimentary hygiene of a young mother whose child did well in the hospital but relapsed as soon as she took it home. Miss Pelton went to the home, helped get the meal, told the mother not to give the baby everything on the table, and the child had no more relapses.

The second case was that of a working girl of 18 who had Raynaud's disease and was absolutely powerless during the winter. As an "interesting case," she was welcome at the clinics; but nothing had been done for her. Her "cure" was simple—she should go to a warm country. But this was nobody's business. Miss Pelton saw the girl's employer and learned that she was a good worker. Then she found a place for the girl in Florida and, from a society founded precisely for this object, obtained the funds to send her there, and also secured a traveling companion for her, as the girl was inexperienced. The result was, a perfect cure of the girl, who otherwise would have been a hopeless invalid.

This service has extended in six years so that it now comprises nine paid employees and twenty-five volunteers. The work is now recognized as indispensable to that of the hospital. The work has been divided, separate sections taking care of the tuberculous, the nervous, young mothers, and hygiene and mechanical appliances. The assistant is present at consultations, seated apart until the physician directs embarrassing cases to her.

In the hospital wards the social service is different. Here the treatment is perfect, but the physical condition of the patient depends largely on his *morale*. The social worker creates around him an atmosphere of amity that was totally wanting previously;

she tranquilizes his mind as to the wellbeing of his family, writes his letters, upon his dismissal sees that the conditions are such as to favor convalescence, aids him in securing work, helps the mother of the family to put her house in order, sees that the sanitation taught at the hospital is continued, and much else. And all this is necessary, that the benefits of the hospital sojourn may not be lost.

Still more, Doctor Cabot demands that the social service correct the hospital routine, and in a way to educate the staff. This humanizing influence by no means is superfluous in such institutions.

The section on cooperation busies itself with the works of public and private assistance, which are infinite in number and which may be utilized if known. The social service incurs only such expenses as cannot be borne by any of them.

The service is directed by a committee of the hospital physicians, the administration, and the social workers. The annual expense is $55,000, the aid-workers receiving from $800 to $1500 a year, and they work from 9 a. m. to 5 p. m., with one month's yearly vacation. The volunteers are indispensable, and they render valuable services, but only when directed by the regular workers.

The plan appeals to our French colleagues so favorably that it is intended to establish a similar service in the great children's hospital in Paris.

A hair, they say, divides the false and true;
Yes; and a single Alif were the clue,
Could you but find it, to the Treasure-house,
And peradventure to the Master, too.
—The Rubaiyat.

ACIDEMIA: PREVENTION AND CURE

When Dr. Eugene S. Talbot was in France, he found the people a nation of soda-takers. The most popular of the French springs is Vichy, and its water depends for therapeutic efficacy upon its content of soda. Every pharmacy and every grocery displayed soda prominently in powder, tablet, granulated and effervescent forms. It would be a nice task for the idly curious statistician to compute how many tons of soda the French consume annually—how many French freight-cars it would fill, how many times around the world the popping corks would fly, and all that.

And all this alkali is needed to neutralize Gallic acidity, to relieve the Gallic blood of acidosis, preserve the Gallic equanimity, prevent the Gallic temper from exploding. Surely, the Teuton astride the Rhine ought to send his potash west at a special discount.

Acidemia is the compensation of poverty, the retribution for riches. The nervous energies being more and more absorbed by the brain, the available supply for the digestive apparatus is correspondingly curtailed. Men of affairs have no time to eat, let alone to digest. Unwittingly they drift into the habit of relying upon easily digested foods, supplying their nutriment with the least possible expenditure of force in utilizing them. Predigested foods, raw or rare meats, and coffee constitute the diet of the would-be millionaire. The roughage is cast aside, then the starches; and, hence, the nitrogenous acid-producers outweigh their natural neutralizers. Well is it if, in the hurry of business life, the man does not go further, even saving the time "wasted" in eating and, instead, sustaining his flagging energies with the deceptive cocktail.

Now comes the doctor, secures a hearing, and prescribes the customary average diet for a man! The man takes it, finds it takes too long to eat, and declares he can't digest it and work his gray cells at the same time; so, he concludes the doctor is mistaken. Every man is a law to himself; he has his personal peculiarities differing from the doctor's, and among them is the fact that he cannot eat such food without feeling logy and oppressed in the stomach.

It is hard to reform a man piecemeal and correct his sins against his body one at a time. Radical reforms do not commend themselves to him—what he really wants is that you shall enable him to go on sinning.

An impaired digestion must be restored systematically. The business must be rearranged to suit; and right here the patient stops—he won't do it. You may be a man of force enough to put the matter so plainly that he must see it, and choose between seven years of dragging an ailing frame to his grave at fifty-five, or living in health until he is years ahead of the alloted three score and ten. Most men are so constituted that death in a few years seems a long way off—and then, perhaps, they may cheat it by some sharp trick.

Now, acidity is the easiest thing to relieve: Take just a little soda, or a sip of diluted ammonia, or some milk and lime-water, or one of the more elegant antacids. Pyrosis quickly subsides under manganese; nausea is relieved by cerium oxalate and bismuth. Any of the sulphocarbolates stops fermentation. Neutralizing cordial goes fur-

ther: it clears the bowels, and incites all the digestive secretions—an admirable remedy.

Pepsin with hydrochloric acid digests albuminoids; pancreatic extract and bilein starts the appropriation of fats; diastase initiates the digestive disintegration of carbohydrates, which is generally at fault; or, papayotin comes in and digests the entire dinner, from the oyster to the nuts.

More: A minute granule of hyoscyamine relaxes gastric or intestinal spasm; another of copper arsenite stops bacterial operations; and one of quassin whips up the flagging appetite, while one of strychnine energizes all the rest, and every nerve, from the cerebrum to the toes.

Gastric catarrhs give way to bismuth subgallate, guaiacol, the oxides of silver and of zinc; or to resorcin. Gastrointestinal pains subside under the mydriatics or cannabis indica. The production of acid neutralized by alkalis, is stopped by atropine.

Emetine clears the liver of accumulated toxins, incites the digestive secretions, and jugulates many an unsuspected horde of amebic invaders. In fact, it does so many things so well that it is a good thing to give on general principles.

The evening granule of podophyllin and the morning saline-laxative draught go far to remove the underlying cause of the trouble.

With all this wealth of really effective therapeutic weapons at our hand, admirably suited to the needs, and certain to relieve when wielded by a skilled hand, there is one indication unmet, one symptom overlooked—the patient.

Nature is remorseless, unmovable. Its laws are more fixed than those of Mede and Persian. There is no such thing as evading or deceiving nature. Plunge over Niagara, and you are crushed. Wade into a quicksand, and you are engulfed.

To cure the man, he must be taught how to live a natural sanitary life, and why. He must be taught to work up to his natural capacity, but stop there; to take the kind and quantity of exercise that he needs; eat and drink the things he should, and allow time during digestion for that function to have its needed supply of blood and nerve-force; sleep when sleep is needful, rest at appropriate intervals. I am one of those who believe a man can do more and do better work in six days than he can in seven, more in eleven months than in twelve; that a Sabbath spent physiologically—religiously—will be followed by a week in which all the bodily energies work at a higher ratio of efficiency.

Further, get the man to consider what all this is for. A man who works without a definite object, or one commensurate with the exertion, is like one riding on a railway that has no terminus—he just rides.

What is the object of work?

Happiness.

When can you be happy, surely?

Today.

Then make sure that each day gives you its full quota of happiness. The man who waits for some indefinite future to realize his enjoyment is a blind imbecile.

Count that day lost whose slow-descending sun
Hears not our hearty laugh, sees not one good deed done.

Let us get rid of our false estimates, set up all the higher ideals—a quiet home; cultivate vines of our own planting; a few books full of the inspiration of a genius; a few friends worthy of being loved and able to love us in turn; a hundred innocent pleasures that bring no pain or remorse; a devotion to the right that will never swerve; a simple religion empty of all bigotry, full of trust and hope and love; and to such a philosophy this world will give up all the empty joy it has.

—David Swing.

KEEPING OUR OWN DOORSTEP CLEAN

For a long time we have watched with admiration the course of the medical organization in Ohio. It has appeared to us to be in a remarkably healthy condition, and to be setting the pace in progressiveness and achievement to many other state societies. Now we know at least one reason for its soundness and virility; we understand the secret of its influence in promoting the sanitary condition of the streets of Jerusalem. It practices the salutary habit of keeping its own doorstep clean—a practice which is highly to be commended to medical organizations individually, and to organized medicine as a whole.

The Ohio State Medical Association has made official request for the names of members of the profession in Ohio who are arrested and convicted of improper practices relating to the dispensing of narcotic and habit-forming drugs, with a view, of course, to subjecting the offenders to disciplinary measures, including suspension or expulsion from the Association, and possibly even the instigation of proceedings for revoking their licenses to practice. This is a step in the right direction; a step, indeed, which any self-respecting organization could scarcely refrain from taking.

It is useless to attempt to blink at the fact that the medical profession is, after all, an

aggregate of human beings, and cannot fail to have within its ranks a certain proportion of rascals. Of these there is no worse type than the physician who so far forgets himself and his high obligations as to become a distributor of narcotic drugs for improper purposes. Men of this character are a discredit and a disgrace to the profession, and organized medicine should not wait for public censorship to demand their removal, but should purge itself of them by its own unequivocal action, following the example which the Ohio Association has set.

In times gone by it used to be the traditional pride of the professional and craftsmen's guilds that the adjustment of mere economic relations, whether among their own fraternity or as between them and the public, was a secondary object of their organization, the prime object being the betterment and uplifting of the art or craft which they represented, both from a professional and a moral standpoint. It is a common complaint frequently urged against the trades unions of today that they direct all their energies toward obtaining a maximum wage for their members, and that they do nothing whatever to insure the said members being individually worth such a wage.

It is to be hoped that in organized medicine, which prides itself on standing upon a different footing, high traditions and lofty ideals will continue to prevail to the extent, at least, of maintaining a high standard of moral rectitude within its own ranks. There should be no more severe and exacting censor of organized medicine than organized medicine itself.

He who makes war on business removes the roofs from homes, takes the bread from mouths, leaves human bodies naked to the storm—replaces confidence with fear, hope with dread, love with hate—and robs men of their right to work.—The Fra.

THE DOCTOR'S VACATION

Some weeks ago one of our friends made the suggestion that we give the readers of this journal a chance to tell something about summer vacations. He thought it would be a good idea to rest a bit from our usual program of scientific and practical articles, giving room to a few papers showing the doctors how to have a good time. "Make the number a picture gallery," he added, "and let us hear from everybody."

We always appreciate suggestions from our readers, and if they are good, we try to follow them. We did so in this instance, and the many pictures and the various articles upon "The Doctor's Vacation" appearing in this number of CLINICAL MEDICINE are the result.

However, we know that many of the readers of these interesting articles will declare they cannot afford vacations. Perhaps some of them will think the space devoted to the topic wasted, although I do not believe anyone who takes the time actually to read the articles will feel that way about them. To these men I want to say just a word. If you cannot afford a vacation away from home, plan to have one anyhow, right where you are. I am reminded of the experience of one of my friends, who one year refused to go into the country for his usual summer vacation. He didn't care anything about fishing, he wasn't strong for boating, golf, or any of the other usual forms of summer diversion, but he did enjoy a good game of baseball. So, he remained at home in his own comfortable apartment, got up in the morning when he felt like it, and took in a baseball game every afternoon. He declared that during that summer he had the time of his life.

Why some doctors want a summer vacation really "gets" me. For instance, if I lived in such a delightful place as my friend Dr. Richard Slee, whose home is nestled right in the midst of the Pocono Mountains of eastern Pennsylvania, you couldn't drag me anywhere else when hot weather came. I visited the doctor last week, at his beautiful home at Swiftwater, and can understand why *he* cannot be lured away at this season. With a trout stream singing at his door, with Nature's own decorations in the way of azaleas, rhododendrons, and other wild flowers lavishly painted on to the scenery everywhere, with thousands of acres of forest-covered mountains as a background, the Pocono country seemed to me one of the most delightful summering places in the world. (If you are looking for a restful place, Doctor, take your auto, your family, and yourself to the Swiftwater Hotel, right beside that singing brook. Also, ask Slee to show you how diphtheria antitoxin and smallpox vaccine is made.)

But I am wandering from my story. There are thousands of doctors who live in places just as delightful as Slee's; thousands of others who can get more rest out of a game of baseball than they could on a hotel veranda; and many thousands more who would enjoy little trips around home more than anything else. Look over the advantages of your own

country before deciding to take a long and expensive trip to places you know nothing about. And it may be that a winter vacation would suit you better than a summer one. More doctors should go south in the winter, just as more southern men should come north in the summer.

After all, it isn't where you go so much as what you do that counts. Plan to have a good time this summer—that's the main thing. We travel through this world but once; and the best things we get out of it are not money, or position, or the praise of men. There is nothing better—there can be nothing better —than to view the beauties of the world with seeing eyes; to taste the delights of healthful, care-free living out-of-doors; to know men and women as they really are when untainted by the money-lust; to love and be loved; to be in harmony with all that lives and breathes. These are the real things which count the most toward happiness. Any vacation that doesn't help you to their attainment isn't worth time, trouble or money. Stay at home, if you can get the most of this kind of "restfulness" there; but don't miss some kind of a vacation this summer.

I don't care what walk of life a man may be in, if he has industry he'll be a success. Initiative and enthusiasm add to the measure of his success—and tact adds still more, but few there be that either possess or try to acquire the full string. When you do find one with all these qualities you'll find a fellow heading for the front row.—Henry D. Wilson.

THE TREATMENT OF CONVULSIONS

To the mother nothing is more appalling than to see her child struggling in a convulsion. There is one picture vividly painted on memory's pages, of a young mother clasping her first-born child to her bosom, the convulsed features of the babe, the agonized expression of the mother as she exclaimed: "That ever I should have lived to see this!"

Wild "S. O. S." calls are sent out in all directions for help—help effective and immediate. Aunty rushes to the telephone; sister speeds up the street in search of a doctor's sign; nursey stands on the doorstep and anxiously signals anybody who looks or smells medical. This is the gate of opportunity that opens for the young doctor who is gnawing his mustache ends in lonely solitude while all the older practitioners are out making their round of calls.

The youngster gets first to the scene—but what is he to do? Something, and that p. d. q. He must get busy. The family are dying for action and he must take command. So, if he be wise or prescient, he begins by putting everybody at work. One is sent to heat water, another for flannels, a third to the pharmacy. People simply cannot keep still and see the poor child suffer. They must do—what they do matters little.

Meanwhile, the doctor is trying to think what *he* shall do for the child. Visions, words, memories flash across his consciousness kaleidoscopically — epilepsy, catalepsy, eclampsia, uremia, poisons, worms, infectious fevers, what not? There is no time for diagnosis. He must act now and diagnose later.

First, look to the alimentary canal, which is the seat of trouble in ninety-seven cases out of a hundred. What has the youngster had to eat? You are suspicious—justly so. Whip out your hypodermic and shoot a dose of apomorphine under the skin at once. Pretty soon the stomach will supply the diagnosis, and another war is over. Then comes the etiologic inquiry—where did that child get bologna sausage or green fruit? Who allowed it?

Or perhaps the hardness of the belly or the presence of "knots" in it shows intestinal spasm, and hyoscyamine in full doses with a few small swiftly repeated doses of calomel, followed by saline laxative, work the cure.

Accept the diagnosis of worms as probable and go after the helminths with calomel and santonin, and you generally get them. Whether they had anything to do with the child's health may be uncertain, but few things win a mother's gratitude more heartily, and you may safely assure her that the worms were not doing the child any good.

An emetic, calomel, a purge and a hot mustard bath comprise pretty nearly the therapeutics applicable for non-febrile convulsions. There is something peculiar about the action of calomel here. How it acts I do not know; that it *does* act and quell the convulsive tendency I know, as does many another doctor. The hot bath is a grand revulsive; it brings the blood to the surface, unloading the cerebral vessels, and tremendously stimulating cutaneous elimination.

When the convulsions are of emotional provocation the treatment above described is effective. No woman can be hysteric and vomit at one and the same time. The worst-spoiled child will behave rather than turn its stomach inside out. But the valerate of zinc or cicutine, a granule of either dissolved in the mouth, repeated every five minutes, will be pleasanter to the patient, and soon results in the restoration of self-control.

When there is fever, the story is different. The convulsion may herald the outbreak of an eruptive fever, or be indicative of cerebral oppression, perhaps preceding paralysis. The application of cold is the modern substitute for the lancet, and I am ungrateful enough to the modern teachers to believe that the venesection was quicker, surer, more effective and not a whit more dangerous, than cold as applied on emergencies in private families.

The pulse-tension may demand a speedy administration of veratrine, here preferable to aconitine, because the hellebore so powerfully influences the eliminants, while quelling circulatory excitement and steadying the myocardium. A full dose of pilocarpine brings out delayed eruption, but so does its direct antagonist atropine, and the choice must depend on the case. I prefer atropine in depressed conditions with cool skin and low temperature. In puerperal or uremic cases nothing relieves so promptly as bleeding, nor so surely as veratrine. A half pint of saturated solution of table salt, ice cold, thrown into the rectum, is a powerful revulsant and never fails to act on the bowels. The exosmosis provoked carries out a great deal of the toxins.

The subsequent treatment depends on the diagnosis. We shall not discuss it here, for by this time the regular family doctor has arrived and we resign the case to him. But for good or ill, our conduct of this case has gone far to establish a place for us in the estimation of the community.

It is not in human nature for individuals to do great service to their fellow men and not occasionally be punished for it. They induce men for a time to set reason and high ideals above the instincts of the herd, and sooner or later the herd must turn and trample them.—Gilbert Murray.

PAINLESS CHILDBIRTH: A WONDERFUL "DISCOVERY"

Once again the potent charm of the "Made in Germany" stamp on things relating to medicine has exemplified itself in a popular article recently printed in *McClure's Magazine* under the title of "Painless Childbirth."

The article is an interesting one, yet many thousands of women in this country, who neither have the opportunity to go to Europe, nor the inclination to achieve the éclat of such a pilgrimage, have been enjoying, in their own homes, for a number of years, the satisfying experience of painless labor under the influence of hypodermic injections of hyoscine and morphine.

The procedure is already well known to thousands of physicians in the United States, has been unostentatiously practiced by them for at least a decade, and long ago passed out of the experimental stage into the established routine of the lying-in room. But it needed that such a beneficent innovation should be postmarked from a German center of medical activity and that a few Europomaniacs should undertake a pilgrimage to some clinic in far-off Germany, to give it the transatlantic flavor necessary for journalistic exploitation in this country.

It really is astonishing how the popular journals of this country, otherwise so alert and up-to-the-minute in every other direction, lag behind the procession in matters pertaining to medical science and practice and allow themselves to be hoodwinked by the glitter of a foreign label on goods that have long passed current in their own homeland.

One is almost tempted to suspect that such an article as the one referred to crept into the reading-pages by mistake (or otherwise) and properly belongs in the paid advertising-space. At any rate, the net effect of such conspicuous publication is to blow the horn of the Freiburg clinic and to create the misleading impression that it is necessary to go thence in order to enjoy the advantages of the socalled "twilight sleep."

To be sure, some of this erroneous influence will automatically be counteracted by the woman readers asking their family physicians about the matter and learning then, if they did not know it before, that the procedure is a comparatively old one and can be taken advantage of in their homes just as well as in far-away Freiburg. Even the handsome young interne who bends over the fluttering patient and gravely and kindly says, "I have come to comfort you," as also the tactful nurse, with her personal magnetism and good looks, can, at a pinch, be duplicated here.

Still, there also will be, on the one hand, a certain proportion of our women folk who will straightway become obsessed by the "made in Germany" craze and cast about in their minds for potent persuasions wherewith to assail their husbands for a trip to Freiburg (in which set-to's they, of course, usually win out); while, on the other hand, there will be that other contingent, who will hopelessly resign themselves to forego the wondrous twilight sleep because of their inability to undertake the journey, forgetting that their own family physician can give them its benefits in their own homes just as well.

Now, to both these classes our alert American physicians must address themselves, in an effort to convince these women that there is balm in Gilead and there still are physicians there —that Abana and Pharpar, rivers of Damascus, are no better than the waters of Israel.

However—nevertheless—notwithstanding, —and for all that—there is for us of the medical profession a lesson in this rather sensational article in *McClure's Magazine*—not *in* the article, precisely, but suggested by it.

The lesson itself, albeit an old one, nevertheless is worth recalling and emphasizing. Years ago we pointed it out, and we have been iterating and reiterating it ever since.

The attention of our readers' is called to the fact that a detailed account of this work done by Doctors Kroenig and Gauss at Freiburg was published by us as long ago as in our issue of May, 1907—just seven years! And we pushed home the lesson then of the great importance Gauss placed on the purity of the mydriatic alkaloid and the accuracy of its mode of administration. We insisted then, and we insist now—as does Gauss—that "scopolamine does not as yet possess the purity of most of our drugs;" and that the surgeon and obstetrician should use a *pure hyoscine*, which, while chemically it may be identical with commercial scopolamine, therapeutically is not always the same, and that this alkaloid must be free from impurities.

As to the exact manner of giving the combination, two points are to be emphasized in Gauss's procedure; namely: first, the asphyxia, or oligopnea, is due chiefly to giving too much morphine, and not to the scopolamine or hyoscine; and, second, that the dose is to be gauged, not by the pain-cries (which continue regularly during the twilight sleep), but by the memory test. It is the neglect of these precautions that has served to discredit the procedure wherever it is discredited, and, conversely, strict attention to them that has brought about brilliant results where it has been successful. To which we may add that the well-known tendencies of scopolamine, or hyoscine, to disturb the pulse certainly justifies the addition of cactus to the combination, for the purpose of steadying the circulation.

We trust that nothing we have said here will be construed as intended to belittle the work of Gauss and Kroenig. These men are doing splendid work, and for this we take off our hats to them. But, to suggest that they have a monopoly in this painless-childbirth business by means of scopolamine (better, hyoscine) and morphine—that is to laugh.

To explore the most secret depths of the unconscious, to labor in what I have called the subsoil of consciousness, that will be the principal task of psychology in the century which is opening. I do not doubt that wonderful discoveries await it there, as important, perhaps, as have been in the preceding centuries the discoveries of the physical and natural sciences. That, at least, is the promise which I make for it.—Henri Bergson.

THE PROMISE OF EMETINE!

A doctor may but rarely take his own medicine, but this doctor has just devoted a useful hour to reading several back numbers of his own journal.

Emetine! The medical profession, it seems, made a momentous discovery! Hear the editor of *American Medicine:* "Emetine as a specific for amebic dysentery and amebic hepatitis is probably the most important therapeutic discovery in recent decades."

And, yet, ipecacuanha was first introduced as a specific for dysentery and the secret of its use purchased by the King of France—so long ago as the time when kings had France—and published to the world. Since that time ipecacuanha has lingered on the horizon as one of the remedies for dysentery, some writers according it honorable mention, more authorities ignoring it.

In what, then, consists this great discovery? Simply that, when we employ the isolated active principle, separated from conflicting principles, we win brilliant successes in those maladies in which the crude drug had proved moderately though unreliably useful. And therein lies the sum total of that for which we "alkaloidists" have been contending.

Open your eyes a bit wider. Stretch your field of vision. You know well the uses to which morphine, strychnine, atropine, quinine may be put—uses that are not possible with opium, nux vomica, belladonna, and cinchona. You virtually have deserted jaborandi, calabar-bean, coca, parsley, quebracho, coffee, colchicum, elaterium, hyoscyamus, yeast, cocculus, willow-aments, wintergreen, wormseed, scoparius, strophanthus, and the kino group for the definite agents pilocarpine, physostigmine, cocaine, apiol, aspidospermin, caffeine, colchicine, elaterin, hyoscine, nuclein, picrotoxin, salicin, salicylic acid, santonin, sparteine, strophanthin, and tannin. Just so our predecessors abandoned the epsom water for magnesium sulphate, or the crude calamin, galena, and orpiment for the pure zinc, lead, and arsenic compounds.

Does it require such a herculean effort to take one step more and see whether similar improvements cannot be secured by abandoning the feeble arbutus group for arbutin, aconite for aconitine, hellebore for veratrine, agaric for agaricin, aloes for aloin, pulsatilla for anemonin, golden-seal for berberine and hydrastine, ox-gall for bilein, bryonia for bryonin, conium for cicutine, condurango for condurangin, lily of the valley for convallamarin, foxglove for digitalin, horse-chestnut for esculin, yellow jessamine for gelseminine, elecampane for helenin, lobelia for lobeline, podophyllum for podophyllotoxin, quassia for quassin, bloodroot for sanguinarine, and bull-nettle for solanine?

For twenty years we have been urging upon you the superiority of emetine over the crude ipecac. Now it dawns on you that we were right. Just try and see how "right" we have been all along the entire line.

Ideals and desires and imaginations are the peculiar possession of young people, not because young people are cleverer than old, nor yet because they are less wise; but because the poet or philosopher or martyr that lives, half-articulate, inside most human beings is apt to be starved to death in the course of middle life. As long as he is still alive, most of them have the key to understanding poets and dramatists.—Gilbert Murray.

HOT-WEATHER HABITS

What advice shall we give to our patients and our clients as to their mode of living during the hot weather which is now close upon us? When I thought of delivering a little preachment on this subject, I went to that section of the editorial library which is devoted to the problems of health and hygiene and took down, one after the other, the twenty or thirty volumes reposing there that purport to deal with the principles and practice of right living, and proceeded to search diligently, the tables of contents and the reading-matter itself, for some systematized information upon hot-weather hygiene; but I found it not—which I consider quite remarkable, and I here and now call attention to this matter as a suggestion to any author who may be revising or thinking of writing a textbook on this subject. So, whatever I may say for the behoof of our readers, I shall have to evolve out of my own inner consciousness—like the man who made a fiddle, I shall have to "make it out of my own head."

It ought not to be a difficult matter to work out a set of "rules of conduct" for the hot-weather period, if one will but bear in mind the peculiar physiologic conditions to which the long-suffering human body is subjected by reason of the climatic extremes of the summer time. Please note that I said *extremes*, in the plural number; for the extremely high temperature of summer by no means is the only exigency that one has to reckon with. Equally important, if not, indeed, more serious, is the extreme of humidity which in many regions so commonly accompanies a high temperature, but without which the element of sheer heat is not, as a rule, particularly trying.

Figuring in the humidity-factor, then, the stress of hot weather upon the body-economy may broadly be resolved into two prime considerations; namely: (1) The heat of the atmosphere exceeds that of the body itself, so that the body is at least estopped from losing any of its own heat, and often actually is forced to absorb heat from the outside; and (2) the concentration of moisture in the surrounding air is of such a degree that the body is deprived of the process of evaporation as a channel for the disposition of excess heat.

From this it will be seen that hot-weather hygienic measures must be directed toward the relief of the two conditions named; and their aim should be a fourfold one: (1) to reduce heat production in the body as nearly as possible to the limit of the body's own requirements, so that there may be only a minimum of excess heat; (2) to prevent the absorption of heat by the body from the atmosphere; (3) to promote *mildly* the activity of the sweat-glands; and (4) to provide for the carrying off of the body-moisture excreted by the skin.

The first of these ends is to be attained by cutting down the oxidation-processes of the body to a minimum, by restricting both diet and exercise, especially the former. All high-calorie foodstuffs should be discarded, a large place be given, instead, to those articles which assist in elimination, such as fruits and light-green vegetables. Of proteins and heavy carbohydrates, no more should be taken than is absolutely necessary—and that is very little; of hydrocarbons, practically none at all. Violent exercise should be interdicted; it is a mistake, though, I think, to abandon exercise altogether, both because light exercise mildly stimulates sweating and also because it keeps one's mind cheerful and contented.

The second object, the prevention of heat absorption by the body, is largely a matter of clothing. As a matter of fact, of course, the temperature of the air can be considerably

in excess of that of the body without the body absorbing any heat, because the healthy skin is a good insulator. Continued exposure to a very high air-temperature, however, will at last force heat into the body. Our best protective measure here is, to imitate and reinforce nature's method, that is, to employ clothing that will insulate without smothering. For this purpose, it is necessary that the clothing possess three qualities: lightness, porosity, and reflecting power, which last is best attained by a light-colored outside and a dark-colored lining.

Activity of the sweat-glands is best promoted by light exercise and a daily light rubdown. It is necessary, of course, to drink more water in summer than in winter, in order to provide for the loss of body-fluid; but simply to swill water, as some people do, is about as bad as not to drink enough. It is useless to drink more than the sweat-glands are able comfortably to take care of, thereby water-logging the system. Indeed, for those who do hard physical work, it is positively dangerous. If the climate be dry, the moisture resulting from perspiration will quickly evaporate; but if the humidity be great (as it usually is) some special provision must be made for carrying it away, of which the chief means are absorbent underclothing, frequently changed, and frequent warm or tepid baths. Cold bathing is a mistake.

Needless to say that worry is the arch-enemy of health and safety in hot weather; and that not because worry directly affects any one of the conditions we have considered here, but because the balance of the body-economy is in a most precarious state during hot weather and worry upsets it more quickly and disastrously than anything else within the range of common human experience.

A WARNING TO LOUISIANA PHYSICIANS

Every physician living in Louisiana should write his representatives in the state legislature to see that his interests are protected before the Samuels' bill, which has already passed the House, is permitted to become a law. This bill apparently is modeled after the Boylan bill passed by the New York legislature, but it goes considerably further.

Under the provisions of this bill, physicians are not permitted to dispense narcotic drugs (opium, its alkaloids and derivatives, and chloral) except upon prescription. The only exception is in the case of domestic and proprietary remedies containing small proportions of narcotic drugs.

Please note this: the sales of proprietary and domestic remedies containing opiates and chloral are exempt from restriction. In other words, the patent-medicine men may sell their wares unhampered to anyone, while *the doctor is not to be permitted to dispense any narcotic drugs, no matter how small the quantity or how harmless the combination except upon a prescription.* Furthermore, to every patient for whom he prescribes a hypodermic injection of morphine, a few cough tablets, or a diarrhea remedy containing opium or chloral, the doctor must give at the time a certificate indicating the name and address of the patient, and in addition he must keep for every patient, an exact record of the drugs dispensed, this record to be preserved for a period of five years and to be open to official inspection.

We strongly advise every Louisiana physician to demand that this bill shall be so amended that it shall not, so far as the proscribed narcotics are concerned, interfere with or prevent any physician, dentist or veterinarian from dispensing them in the course of his professional duties, providing he does so in good faith, and not for the purpose of evading the provisions of this law.

We also may be permitted to express the hope that influential members of the medical profession in Louisiana, men like Dr. Oscar Dowling, president of the State Board of Health, and the officers of the State Medical Society, will see to it that this bill is carefully scrutinized in every particular, and that its inconsistencies, dangers, and all unnecessary professional burdens are eliminated before it is passed.

Another thing. It has been stated to us that New York's Boylan bill is so filled with contradictions, is so defective, that it will, undoubtedly, prove unconstitutional. This only shows that instead of rushing through half-considered and dangerously defective legislation in our state legislatures, the strong men in our profession ought to be uniting their energies for the passage of the Harrison antinarcotic bill, which, as passed by our national house of representatives, is a safe, sane, and carefully thought-out measure and one that will prove effective.

Every doctor should get behind this Harrison bill *now*, writing his senators to see it through at once—and *in the form passed by the House.* He should certainly object to the amendment requiring physicians, dentists and veterinarians to keep for two years a record of all narcotic drugs dispensed, in a special book. This amendment has just been tacked

on to the Harrison bill. It would include records of hypodermic doses, local anesthetics, cough tablets, diarrhea tablets—every dose of a narcotic the doctor might administer.

If the Harrison bill were to become a federal law, it could be used as a model for the individual states; when some degree of uniformity at least naturally could be expected in this important matter. Fight for it but oppose dangerous amendment.

But once more as to the Samuels' bill our professional brethren in Louisiana should demand and in no uncertain tones, that it be held up until the draft is known to be right, from the doctor's standpoint—which is the standpoint of the suffe ing sick whom he serves, and whose interests it is his duty to protect.

LATER.—We have just learned that the Samuels' bill has been indefinitely postponed by the legislature by a vote of 39 to 28. An effort to revive it was subsequently voted down. Louisiana doctors are evidently awake.

If there be a love, here or hereafter, higher, more sacred than the love of mankind for mankind, of lover for lover, we shall come to it in good time. While yet men we shall do well to love as men. Only first loving as men could fit us to love as gods.—Harry C. Morse.

DIABETES—BACK TO AVICENNA

A native of Tunis familiar with the Arabian tongue, Doctor Dinguizli, has attracted considerable attention by his resurrection of Avicenna's method of treating saccharine diabetes. Avicenna, that illustrious Arabian physician, of whom we all know, of course, lived in the twelfth century. His work is known today only through Latin translations, which, unfortunately, are full of inaccuracies.

Dinguizli, who is an accomplished Arabian scholar as well as physician, had employed the modern methods of treating diabetes, but without much satisfaction. Turning, at last, to Avicenna, he found the disease described without the omission of a single leading symptom. In the treatment, he forbade the use of sweet fruits and aliments, because "sugar augments combustion in the body and, consequently, the animal heat." That was his entire regimen for the patient. But Avicenna made use of some plants not now known in medicine or else looked upon merely as the vestiges of a forgotten pharmacopeia. Among these plant remedies were fenugreek, lupine, and wormseed.

Thereupon Dinguizli began to prescribe those drugs; not, indeed, from blind attachment to the instructions of an old coreligionist, but because the modern treatment had failed him. Administered separately, the remedies of Avicenna did nothing; but when given in conjunction (in cachets) they proved effective. Under their influence, Dinguizli found the polydipsia and concomitant polyuria to disappear; and the urinary sugar fell to zero, except for some traces, which he attributes to the glucosides in the medicaments. The general state of the patients improved *pari passu*. Illustrations from practice accompanied his work, which he presented to the Academy of Medicine, showing the evident beneficent action of the preparation, harmless, yet very effective.

Professor Robin tried the remedy in the case of six patients, some being very grave, with acetonemia and albuminuria; and he reports as follows:

"One cannot form definite judgment on this treatment of diabetes, because of the small number of patients treated, and also because no biochemic study has been made of the plants employed. But the preparation has not given rise to any inconveniences, while it has caused the glycosuria to disappear in three cases and reduced it considerably in three others. The treatment seemed to act better when added to the classic regimen for diabetes; but with the three in whom the sugar disappeared this was unnecessary. The acetone substances and the traces of albumin disappeared in one patient, and the traces of albumin in another, who was *un grand diabitique*."

M. Bournigaut also tried the treatment of Avicenna, with results quite as strongly corroborative.

A few such notable examples, and we shall see the return to drugs accelerated with a rush. One great mistake we make is, in forgetting that these old sages were quite as close observers as we, and probably more so, as they had no instrumental aids. Those men of old were quite able to judge of the action of remedies, and their results often were as good as the best we can boast today.

NITRITES AND THE HEART

K. Schloss, of the Poliklinic of Freiburg after a series of animal-experiments, arrived at the conclusion that nitroglycerin (glonoin) is the most efficient of the nitrites, and especially preferable when, as in arteriosclerosis, it is desired to effect a prolonged insanguination of the heart.

Leading Articles

Experiences With Nuclein in the Treatment of Insanity*

By FRANZ HAUBER, M. D., Rufach, Germany

Of the Ober-Alsassichen Heil und Pflege Anstalt—Doktor Gross, Direktor

INSPIRED by the success of Fischer, Donath, Van Wagner, and Pilcz in the treatment of progressive general paralysis with tuberculin and nuclein, the author started his work along these lines in 1910, and has continued systematically since then. The preparation employed by him is sodium nucleinate; this substance being preferred to tuberculin—which not always is harmless—while having the same general effect as the latter. All paretics were subjected to the treatment, as were also all the completely demented paretics—for the sake of control—although no results were anticipated in their case.

After the first favorable results, especially those obtained in recent cases of general paralysis, the author extended his experiments also to cases of dementia præcox. All those relatively recently diseased, especially the excited catatonics, received the injections systematically; for experience had shown that in them periods of improvement would occur sooner than in the inveterate. A few cases of manic-depressive psychosis also were treated with nuclein.

The Solution of Nuclein Employed

The solution for injection, always freshly made, was prepared according to Donath's formula, [1] viz.: sodium nucleinate, Gm. 10; sodium chloride, Gm. 1; distilled water, Gm. 100. At first a 2-percent solution was used, but later one of 10-percent strength; but still later the author returned to the 2-percent solution, for certain reasons to be explained further along. At the beginning, physiologic salt solution was injected simultaneously with the nuclein, but later this was omitted, since there was no difference in the results obtained.

As a rule, the injections were given every four to eight days. The nuclein administered in one of such courses amounted to 8 to 12 Grams. Later the doses as well as the number of injections were increased, so that eventually in the course of one such "cure" from 20 to 25 Grams of nuclein would be administered. In a few cases of general paralysis, the course was repeated one or more times, with intervals of a few weeks between, so that in the course of these three or four injection-series the patient received altogether from 35 to 45 Grams of nuclein, and in this way the leukocytic reaction was induced and intermittently maintained over several months.

In general paralysis, the nuclein "cure" was at first combined with more or less energetic antiluetic treatment, according to the nature of the case; but as a rule the following scheme was the one adopted: Before initiating the "cure," some arsenic and iron preparation; next, potassium iodide (1 Gram three times a day) for several months; then simultaneously with the nuclein, or alternately, a mercury preparation and salvarsan, in doses of 0.3 Gram, intramuscularly.

The preparation that seemed to be most suitable here were: arsenferratose, potassium iodide, and enesol (mercury salicylarsenate). In some cases of dementia præcox, it was found convenient to administer, together with the nuclein and arsen-iron, some organi-therapeutic preparation, preferably thyreoidin, as a rule.

No local anesthesia was induced before making the injection; still, if the patient was very sensitive or showed dread, a sufficient tolerance was obtained by giving small doses of scopolamine-morphine.

Generally the injections were painful, but especially so the 2-percent solution, owing to

*This paper, in its rendition into English, has been much condensed from Doctor Hauber's original paper published in the *Zeitschrift fuer die Gesammte Neurologie und Psychiatrie*.

the large amount of liquid introduced and the longer duration of the process. Since only fresh sterile solutions were used, not much local irritation developed, while formation of abscesses was completely avoided, excepting in one single case. However, often a painful infiltration, with an erysipelas-like redness of the skin did appear; but this was quickly brought to an end by means of compresses wet with alcohol. [Lundvall declares that the 20 percent nuclein solution, containing also quassine and sodium cinnamate, is not painful.—Ed.]

The Reaction to the Nuclein Injections

The desired reactions—namely, increase temperature and hyperleukocytosis—were promptly obtained in every instance. The average maximum temperature was 38° to 39° C.; but sometimes the temperature went as high as 40° or 41° C., and then was accompanied by chills, nausea, and vomiting. This increase appeared as early as six or eight hours after the injection, and then during the next two or three days it gradually receded to normal.

In patients whose temperature was subnormal, the reaction was interesting, in that the injections were followed by a temporary average increase to normal. In a few cases no temperature rise occurred, even when the doses were rapidly increased; instead, a temporary marked increase of the pulse rate was observed.

Hyperleukocytosis could always be demonstrated, even in those whose temperature failed to rise. The average increase of leukocytes amounted to from 8000 to 20,000. The hyperleukocytosis generally lasted longer than the fever. In the few patients in whom hyperleukocytosis already existed, a corresponding increase of leukocytes in the blood followed the injection.

Precautions Necessary in Treating Paretics

Disagreeable after-effects were seldom observed with the nuclein "cure." A few patients who had received a large number of injections complained for a long while of a drawing and irritating where the injections had been made. This pain was partly due to an abnormal development of the skin about, but which usually disappeared by slow absorption.

In treating psychoses, considerable caution was necessary, owing to the possibility of physical complications. Quiescent tubercles often were seen to flare up. In one patient, the course of the disease was thereby influenced in an unfavorable way. In every instance where the heart was not perfectly sound (myocarditis, coronary sclerosis, aortic aneurism in tabetics and paretics), threatening cardiac signs appeared, such as irregularity, weakness of the pulse, and a marked increase of pulse frequency that did not correspond to the increase of temperature.

By careful selection of the cases and giving prophylactic stimulants, these disagreeable effects later usually were avoided.

In spite of all the care exercised, two of the paretics succumbed quickly after the first nuclein injection. In the first one, profuse diarrhea appeared. In the other patient, the fever caused by the second injection did not, for some inexplicable reason, recede, while, after some time diarrhea also set in. These profuse diarrheas, which could not be checked by any therapeutic means, brought about the end. The impression has been gained, though, that this was not because of any incidental complications, but, rather, that the nuclein injection was harmful and favored the fatal result. Perhaps there was an idiosyncrasy to sodium nucleinate. Kraepelin, as early as 1912, called attention to the existence of such a condition.

One other patient, who had Huntington's chorea, and received the nuclein treatment, also reacted unfavorably to the injections. This patient complained of persistent and violent headache, digestive disturbance, and nausea; his weight rapidly decreased, and at last he refused all food, and an unrestrained state of excitement pulled the patient still further down physically than ever before.

Aside from these unfavorable experiences, the nuclein produced, with a careful choice of the cases and marked individualized treatment, nothing but good results physically.

Paretics Generally Improved

After appropriately regulating the dietary, the general condition of the patients treated was almost always improved; but that this improvement was due to the nuclein treatment was evident in many cases without further proof. The nuclein, in these subjects, proved an excellent tonic: often after the first course of injections the strength of previously decidedly decrepit patients increased rapidly, their appetite improved, digestion more regular, assimilation of food became better, sleep more restful and of longer duration. In this way the loss of weight was checked, and in some cases even a permanent increase in weight was obtained.

without any pathologic accumulation of fat masses, particularly in paretics.

This general and prolonged tonic effect consequent upon the nuclein treatment left no doubt in our minds as to this drug's great value, in view of the possibility of its applicability in psychoses for its quieting effect and its ease of utilization; for, by improving the patient's general condition and vitality, the ground would be laid for subsequent periods of intermittent arrest of the disease. The author is also convinced that the very striking tolerance for the preliminary, and often very severe, mercury treatment—so contrary to previous experiences in paretics—must be ascribed to the influence of the nuclein.

This increased tolerance for mercury after nuclein treatment was strikingly demonstrated particularly in the case of one of our paretics, in which there was a faint suspicion of brain lues. This patient was first treated with mercury without simultaneously receiving nuclein, and although every care was used there followed a rapid physical breakdown, eventuating in a violent paralytic state of excitement. Then he was subjected to a preparatory course with nuclein, in consequence of which he recovered physically; and now this same patient bore a very energetic course of antiluetic treatment remarkably well. At the same time improvement of his psychic condition also occurred.

The tonic effect of the nuclein injections was greatest when a 2-percent solution was used, while a 10-percent solution often failed to give the same result. The author believes that this must be attributed to the larger amount of fluid (that is, physiologic salt solution) introduced when the weaker solution is used.

In the few cases of dementia præcox in which thyreoidin also was administered, no considerable disturbances were observed when directions were followed—that is to say, when the thyroid medication was begun only after stimulation with nuclein.

Nuclein Treatment of Progressive General Paralysis

The author, himself, has treated 36 paretic dements, of whom 9 were in a highly advanced stage. In 3 of the latter, the nuclein injections must be considered to have had a directly harmful effect, while the rest did not react at all. Altogether 27 relatively recent cases of general paralysis were treated, of which 14 (that is, 51.86 percent) were not influenced at all; while the other 13 (that is, 48.15 percent) were very much improved, and all of these could be discharged. However, the tonic action of the nuclein is quite remarkable; for improvement in the patient's general condition never failed to appear, even in very advanced cases and when no specific psychic improvement could be observed.

Many times the marked sedative effect of the nuclein injections appeared very early, and often greatly excited paretics quickly fell into a long-lasting deep sleep after receiving an injection. Distinct sedative effects also were obtained in the control-experiments with ordinary physiologic salt solution (with or without adrenalin); the symptomatic results from the nuclein injections, though, in every respect were more lasting, since the temporary sedative effect practically always was followed by a prolonged quieting effect. The condition of great excitement and confusion decreased, and the patient became more sociable and more orderly in his behavior. Orientation returned, the sense of place and locality being first; and the disposition became more uniform and more like normal. A certain euphoria remained and it was surprising to see how the memory, which had been lost, was being regained. Never, however, did the symptoms disappear completely, no matter how marked the temporary improvement might be. Complete restoration of mentality never resulted.

The periods of improvement following this treatment were usually very pronounced and occurred more frequently than in the untreated victims. Strictly speaking, it cannot be said, however, that all the periods of temporary improvement observed were results of the nuclein treatment nevertheless, it may be claimed positively that these spells of improvement were more frequent and more pronounced than they were anterior to the treatment.

Danger of Discharge During Remission

One unsatisfactory feature is that when the patients were discharged during a period of remission (improvement) it was found that not once were the results lasting. Out of the 11 patients mentioned above, 6 came back after an interval of several months, owing to a more or less violent recrudescence of their symptoms. Still, by means of a renewed nuclein course, the acute aggravation of the disease was overcome in all of them, while also a certain quieting effect was obtained. Nevertheless, the progressive deterioration was not arrested.

In the case of totally demented patients, the author hardly expected the nuclein treatment to improve this condition, but he found that it even did more harm than good. In such patients, the best course proved to be to follow the principle of *quieta, non movere.*

Nuclein Treatment in Dementia Præcox

Looking over the literature on the treatment of dementia præcox with nuclein, we see that Lepin has treated 12 cases, of which 3 were slightly improved, and 9 absolutely uninfluenced. Itten had 9 cases, without obtaining any results. Lundvall treated 18 cases with 20-percent sodium-nucleinate solution, to which were added arsenous acid and hetol; 4 of these were cured, 9 were much improved, 2 slightly improved, and 3 uncured. Donath reports 14 cases; 3 were cured, 5 were improved, 3 became worse after temporary remission had taken place, 3 uncured. Donath thinks that the unsuccessful results obtained by Itten were due to the fact that he used, all told, only about 5.8 Grams of nuclein, while his own patients received on an average 14.8 Grams.

The author himself has treated 20 cases of dementia præcox of different types and duration, and of the 20 cases 10 (i. e., 50 percent) remained uninfluenced. However, these were all very advanced, the patients being already considerably demented and prognostically without any prospects.

Two of these 10 patients showed temporary slight improvement; a continuous stupor, which had lasted for months, disappeared quite suddenly after the second nuclein injection, which however did not last. Both patients are now in a very advanced state of dementia.

In 2 of the remaining 10 cases, the treatment has not yet been completed; still, any considerable influence upon their psychic condition has not as yet been observed. Both cases are advanced. As a curiosity, it may be mentioned that one of these patients, after being a catatonic, positively having refused everything for more than a year, now takes food willingly and abundantly. In the third case, the treatment had to be discontinued for special reasons.

The remaining 7 cases (that is, 35 percent) were decidedly improved, all having long intervals of remission. In fact, 4 of these were in such a condition that they were dismissed, as being able to work. In the remaining 3 cases, the improvement was less decided. One of the patients, whose conduct gave very little hope of improvement when he left the institute, recovered later in a surprising way. He was reported perfectly healthy by another physician, and showed any excitement only when under the effects of alcoholic excess.

Nuclein Treatment of Manic-Depressive Insanity

In regard to the treatment of manic-depressive insanity, Lepin is the only investigator who has reported on the nuclein treatment in psychoses. He treated 13 patients. Of these, 8 were cured, 2 much improved, 7 slightly improved, 2 uninfluenced. Lepin concluded that the old dogma of psychiatry, to the effect that the course of a manic-depressive attack can not be influenced at all, does not hold, after once it had been shown that precisely the melancholic condition was shortened and favorably influenced by his treatment.

The author has used the nuclein treatment in 6 such patients. 3 of them distinctly periodic, 2 melancholic, and 1 with chronic mania. In one case of melancholia, the treatment had only a temporary favorable effect; in the second, no result was obtained. One victim of periodic psychosis was improved and could be dismissed before the end of the full treatment. In the second periodic case, only a temporary effect was obtained. The third received 9.8 Grams of sodium nucleinate, but without showing any favorable result whatever. However, the patient recovered after a long period. The sixth patient was a confirmed maniac. The nuclein did not produce any lasting result, although a certain temporary sedative socializing effect was observed.

Conclusions

1. Sodium nucleinate is entirely harmless when the cases are carefully chosen. It is a very reliable remedy for the artificial induction of the febrile state and of hyperleukocytosis. The desired reaction appears with certainty in a surprising majority of the cases. The individual psychosis groups show no difference in their mode of reaction. The preference for the nuclein treatment lies in the stimulative and marked tonic action of the remedy. The tonic effect to be obtained with nuclein seems to lay the foundation for the subsequent periods of intermission.

In connection with the nuclein treatment, the following adjuvant therapeutic measures are urgently recommended: Individualizing regulation of the diet, open-air regimen, careful dosimetric therapy. Because the effects

of the nuclein are solely preparatory, no lasting results or absolute cure can be obtained, even if the treatment be carried out ever so intensively. Perhaps, though, such results might be obtained by the combined treatment with nuclein and other remedies. The combinations thus far tried have not given definite results.

In progressive general paralysis, the very intensive antiluetic treatment made possible by the nuclein stimulation has not fulfilled expectations.

In dementia præcox, the administration of thyreoidin in connection with the nuclein "cure" seems to present better prospects. At all events, further experiments in this direction are very desirable.

2. The increase of the prospects of intermittent improvement in the paralyses treated by way of preparation with nuclein are striking, as compared with the spontaneous remissions. The improvement obtained with nuclein is, in general, greater, although not different than that occurring spontaneously. Likewise, artificially produced improvement is not a cure of the paresis itself; rather it indicates (as it also does in spontaneous remissions) an overcoming of the acute exacerbation and of the aggravation in the course of the paresis. (Baillarger, Wernicke, Alzheimar, Schroeder.)

A restitution to normal, that is, an absolute cure, does not occur. In most favorable cases, a *status quo ante*, or, the condition which existed before the appearance of the acute attack, is reached. The effect of nuclein is symptomatic. A cure of general paralysis with nuclein is completely excluded.

The advantage of the nuclein treatment is that the average term of life of paretics may be prolonged by the increase of the power of temporary improvements—the length of this latter period, the consequent diminishment of the rapidly progressive tendency of the disease, and the removal of the great danger of acute exacerbations.

3. To answer the question, whether the favorable results obtained in dementia præcox, as above reported, are ascribable exclusively to the nuclein is just as difficult, if not more so, than in the case of progressive general paralysis. Dementia præcox is also inclined, in a higher degree than general paralysis, to spontaneous intermissions. The prognosis is very uncertain, and it can in no case be anticipated with certainty that a remission will occur.

Whether the remissions observed have been artificial or spontaneous, consequently is uncertain One could not, however, help but get the impression that the nuclein treatment must have been of some advantage in some of the dementia-præcox cases. These, though, refer only to relatively recent cases of the disease; particularly in hebephrenia, in one patient who had reached a good state of remission, the nuclein treatment, combined with a course of thyreoidin treatment, seemed to have a very favorable effect. The treatment was of no advantage in advanced dementia præcox cases, even when prosecuted vigorously.

The possibility is not excluded that through this treatment an increase of the power to improve could be obtained in dementia præcox, as it has been in paresis. If this be the case, and if it can be proven by further experiments, then we have in nuclein an important remedy that should not be underestimated, because—as experience has shown —periods of temporary mental improvement in dementia præcox often lead to a cessation of the disease and a cure of the disease.

4. The author has had too few cases of manic-depressive insanity to arrive at any definite conclusion. The treatment of these few cases with nuclein did not give satisfactory results. He has ceased to use it for this purpose.

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[The preceding article, we believe, will be of peculiar interest to every person interested in the treatment of insanity, especially since the appearance of Dr. Bayard Holmes's paper in the May number of CLINICAL MEDICINE, in which Lundvall's method of treating dementia præcox with nuclein was so clearly and entertainingly presented. Hauber's article, the English version of which herewith is presented, assuredly is an important contribution to nuclein therapy, and, if taken in conjunction with the contributions of Lundvall and other European psychiatrists, it clearly shows that in nuclein we have a remedy of exceeding importance.

While of course it is too much to expect that this new mode of attack should prove curative in paresis—a disease which is usually considered beyond hope of successful treatment—the fact that at least a certain improvement follows the employment of this remedy lends credence to the hope that some time it may be possible to master it, providing individuals so afflicted can be seen sufficiently early.

In the case of dementia præcox, the evidence is accumulating that brilliant results are obtainable with nuclein. Dr. Bayard

Holmes, who has used it more than anyone else in this country, is an enthusiast concerning its possibilities; while we ourselves are convinced that when once physicians know how to handle the drug, and know how to handle their cases, a very considerable percentage of these unfortunate young people may actually be cured.

Personally, we are of the opinion that a well-builtup solution of nuclein, similar in composition to that employed by Lundvall, will assure better results both in dementia præcox and in paresis of the insane than will an extemporized normal-salt solution like that employed by Donath. The Lundvall solution contains other substances stimulating leukocytosis besides the nuclein; the quassin, for instance—as Doctor Lundvall has informed us in a personal letter—being added for that purpose. So, also, the sodium cinnimate stimulates leukocytosis, although Lundvall has recently informed us that he is now discontinuing this substance and substituting for it arsenous acid; which latter is powerfully tonic and thus adds to the reconstructive power of the other ingredients of the formula.

We venture to hope that among those who may read this article by Hauber there may be some who will feel inclined to try out this method of treatment thoroughly: making a scientific study of the blood-picture in all cases, verifying the diagnosis by the Abderhalden and other appropriate tests, and keeping a close watch upon the diet, exercise, exposure to sun, condition of the alimentary canal, and the various other factors necessarily playing an important part in contributing to improvement and eventual recovery. It is with the expectation that the publication of these articles may stimulate investigations along this line in America that we have submitted them to the readers of our journal.—Ed.]

The Diarrheal Diseases of Infancy and Childhood

How to Treat Them Successfully

By GEO. H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—Did you read the first installment of this interesting article, published in our June number. If not, look it up. You will enjoy it. In this issue Doctor Candler gives the real "meat of the coconut." He tells us how to go about it to treat these cases successfully. His paper is as timely as it is interesting and practical.

[Continued from page 489.]

IT SHOULD be remembered that many children are prone to suffer more or less from "looseness of the bowels" during the hot months; still, if given reasonable care these little ones will go along from spring to winter without experiencing any serious disturbance of the alimentary tract. The parents must be cautioned to ward against sudden chilling of the child's abdomen and warned that it is extremely dangerous to allow iced drinks, ice-cream, and the like, in large amounts when the child is overheated; indeed, fully a third of my cases of enteric trouble are due to overindulgence in iced beverages, or else to overripe fruit or partly decaying food. As for drink, cool milk with vichy or seltzer is one of the safest of summer beverages; dilute grape-juice may be given to children more than two years old, provided that it be not ingested within an hour after milk was had.

A thin flannel band should be worn around the abdomen by children who show a tendency to diarrhea. When the "fruit season" arrives, a certain increase in the number of stools is to be expected, and as long as these do not exceed two a day, do not contain undigested material or present evidence of fermentation, interference is not called for. On the other hand, the parents should be instructed to make report at the very first sign of colicky pain or frequent passage of thin watery, pasty or stinking gaseous stools.

Furthermore, it may be well to warn the mother that not infrequently obstinate constipation ushers in a gastroenteritis. The child misses its daily movement, complains of vague distress in the abdominal region, and loses desire for food, or, sometimes, craves unnatural articles of diet, while the abdomen becomes swollen. Only by means of enemata can a stool be forced, this usually

consisting of a light, almost clay-colored mass or "balls," in some cases a vast amount of gas being expelled with the feces or after them. Usually about the second day the tongue becomes heavily coated and the little one complains of thirst. The temperature may rise to 100° F. Within the next forty-eight hours, diarrheal discharges make their appearance and the condition may prove quite intractible. I may add that I have never seen these symptoms described in textbooks dealing with diseases of children, although they are not at all uncommon in this part of the world.

Treatment of Simple Diarrhea

The treatment for this condition is simple and effective. First of all, withhold solid food for forty-eight hours. Wash out the lower bowel with water containing glycerin or with warm soap-suds. Internally, give one ounce of castor-oil, or, rather—if you value the affection of your little patients—that amount of some one of the sweetened and flavored preparations of the oil now procurable. I have used laxol with great satisfaction. Then, every two or three hours administer papain, 1 grain, and diastase, 1 grain, preferably with an ounce of a weak solution of dilute hydrochloric acid (10 drops to 8 ounces of water). Three times daily have the child chew three galactenzyme (Bulgarian bacillus) tablets and, after the noon and night meal of bouillon, thin gruel or barley-water and milk, give phenolphthalein, 1-2 grain, and calomel, 1-6 grain, with aromatics. As soon as the appetite returns and the stools are free from offensive odor, return to the ordinary diet, but continue the bacillus-bulgaricus tablets for a few days; if digestion is imperfect, the digestive ferments should be administered after meals.

This same treatment, of course modified somewhat to meet individual conditions, applies in most cases of gastroenteritis in older children, seen early.

I cannot refrain from again pointing out the advisability of impressing upon mothers the necessity of reporting the *very first sign* of enteric trouble. This particularly applies to infants and children entering upon their second summer. Quite often the doctor is called twenty-four or even forty-eight hours after an acute gastroenteritis has set in, only to experience the mortification of seeing his little patient succumb to cerebral congestion, toxemia or exhaustion after the diarrhea has been checked and the other distinctive features of the disease eliminated.

If early and rational treatment is called for more urgently in one disease than another, it certainly is in acute gastroenteritis. Two forms of the disorder are recognizable, the one mild, the other severe in character.

In the mild form of the trouble, the child (who may be teething) shows signs of malassimilation: food passes through the bowel imperfectly digested, accompanied by much gas; also attacks of vomiting occur. After a day or two, the vomiting and the stools become more frequent, the latter carrying either a greenish-brown slime or consisting of a greenish or dirty-gray fluid. Still later, there may be mucus streaked with blood, and the odor of these discharges is most offensive. All along, the child is fretful and complains of cramping pains, or, if too young to speak, draws its legs up and screams. The skin is hot and usually dry, while in the milder cases the temperature will rise about one to two degrees. Occasionally vomiting is absent; in others, diarrhea does not appear for some hours after the vomiting and other evidences of gastrointestinal inflammation.

In the severe forms, all these conditions are accentuated. The temperature may reach 103° F., and as many as fifteen or twenty stools may be voided in the twenty-four hours. I have noticed that such cases usually begin with obstinate vomiting and the passage of one or two stools containing much indigested food. The vomitus at first contains sour food-material and later consists of a foul fluid containing mucus and bile; but, since the child is extremely thirsty and craves for water, this abundance of fluid can easily be accounted for, of course.

This disease affects alike the infant on the breast or bottle-fed infant and the child getting mixed diet. While improper feeding without doubt is the usual cause, heat and bacterial invasion of an exhausted system are solely responsible in many instances.

The disease must be looked upon as mildly infectious, and, so, the stools and vomited matter should be carefully disinfected. The affected child may gradually waste and become almost a skeleton, but, also, the disorder may abate after a few days and recovery ensue rapidly. In very marked cases, death may occur within forty-eight hours. Sometimes two or more such attacks will occur in the one season; also not at all infrequently enterocolitis follows.

The Treatment of Gastroenteritis

Knowing, as we do, that the whole chain of symptoms is due to the presence, in the ali-

mentary tract, of undesirable material and bacteria, and that no gross pathological lesions exist, treatment really is simple; still, to be effective, it must be of a positive character.

As in cholera nostras, we have to get rid, as fast as we can, of the fermenting, germ-breeding, toxic bowel contents. Further, being aware of the presence in the rugæ of the intestine of millions of pathological micro-organisms, we must not put into the alimentary tract material favoring germ propagation. We must also administer in effective doses intestinal antiseptics of an astringent character.

The very first step is, to stop all food, and to wash out the lower bowel either with a plain cool saline or some mildly alkaline antiseptic solution. If the vomiting is marked, pass a catheter into the stomach and wash it out. However, since this is not always feasible, then, as a substitute, give a mild slightly acidulated solution of magnesium sulphate, sweetened with saccharin. It is well to give 1-10 to 1-6 grain of calomel and 1-12 to 1-6 grain of podophyllin half-hourly for four to six doses, according to the age of the child, in order to secure a thorough emptying of the intestine and increased hepatic activity. This is the "first thought." One dose of the foregoing should be given before anything else is done, and the physician himself (unless a competent attendant is present) should then administer the enema. One hour after the last dose of calomel, give a fairly full draught of saline laxative. This serves to flush the already cleaning intestine and leaves the mucosa in good condition to withstand bacteria and to absorb such nutritive material as is allowed.

During this time, if the skin is hot and dry, have the child sponged hourly and covered lightly with a thin flannel garment. It is to be kept in a cool, shady place. Barley-water, made thin, will prove the best drink at this period. The Bulgarian-bacillus tablet (galactenzyme) may well be given with each draught. Every two hours at least 1 grain of the combined sulphocarbolates of calcium, sodium ,and zinc should be administered—preferably in solution. A mentholated saccharinated tablets is obtainable, which serves excellently. In bottle-fed infants, this solution may be given from the bottle, as also may the laxative saline draughts. In older children, the powder mixed with a little sugar of milk may be given on the tongue and a drink of boiled (or barley-) water follow. Very minute doses of atropine (or hyoscyamine) are of great service during the first day; 1-250 grain being dissolved in six teaspoonfuls of water and of this a teaspoonful given every two hours.

If this treatment is carried out, the next day will reveal a recovering patient. But here care means everything. The sulphocarbolates must be continued, the lower bowel flushed, the mouth kept clean. Albumen-water, barley-water containing a few drops of fresh beef-juice, or a few spoonfuls of a well-cooked cereal gruel may be given. Zwieback is safe and well liked by most children. Under ordinary circumstances, this diet may be slowly but surely added to, until normal feeding again prevails. Brucine, 1-128 grain, or hydrastoid, 1-6 grain, may be given as a bitter tonic for a few days. It is also a good plan to undertake on about the fourth day another course of calomel and podophyllin; or, in place of the latter, irisoid, 1-6 grain, may be given hourly for four doses. If the stools are markedly offensive and clay-colored, add bilein, 1-12 grain, to every other dose. The effect is immediately noticeable.

When There Is Hyperacidity

Occasionally hyperacidity will be marked. Here, a few doses of calomel (gr. 1-6) and soda (gr. 1) act satisfactorily. Should the condition persist, a few doses of neutral cordial (sodium carbonate, gr. 1; sodium sulphocarbolate, gr. 1; emetine hydrochloride, gr. 1-1000; hydrastine hydrochloride, gr. 1-32; berberine hydrochloride, gr. 1-32; rheoid, gr. 1-6; aromatics, q. s.) will prove promptly corrective.

It should not be forgotten that in all these cases more or less local congestion exists, and that for this atropine is one of our best remedies, bringing, as it does, the blood to the surface. Moreover, this drug stops the excessive secretion of mucus—another desirable feature. It is always well to give fairly full doses of atropine at once when the skin is cold and pale; cactoid and brucine (each, gr. 1-64) will, perhaps, prove the best subsequent stimulants.

If the disease has progressed and weakness is marked, nuclein is strongly indicated; 6 or 8 drops should be given under the tongue thrice daily. It is in these cases, too, that rectal injections of beef-juice and starch-water prove so valuable.

In those cases where the system has been deprived of large amounts of serum, enteroclysis is imperative, and here decinormal salt solution, with 2 drams of prepared blood to the pint, proves especially very valuable.

It is well in all well-marked cases to give thin, clear beef- or chicken-bouillon for the first day or two after normal conditions are restored, returning to milk very gradually.

Acute Enterocolitis

This disease is especially troublesome during the late summer months and requires careful and somewhat prolonged treatment.

Shiga's bacillus unquestionably is the prevailing microorganism and the colon the seat of marked deteriorative changes. Hence, the necessity for continuous medication, varied from time to time to "suit the conditions present."

Not at all infrequently, enterocolitis (dysentery) follows upon the heels of gastroenteritis, and sometimes the doctor is not called till this condition has become established. Children from one year of age to seven are subject to ileocolitis; the older the child, the more likely is it that the disorder will prove secondary.

As a primary infection, enterocolitis is not common among reasonably well-fed children. The early symptoms are likely to be confounded with those of acute indigestion (which see). The two conditions may coexist.

There is more or less pain and swelling of the abdomen; the child vomits perhaps and has several stools daily, preceded by "gripes." The dejecta at first are greenish or yellowish-brown and carry streaks or are followed by mucus and blood. Later there is more mucus than fecal matter and blood may be plentiful. The seat of infection invariably is the colon, but one or more feet of the ileum (above the ileocecal valve) may also suffer. Occasionally the enlarged follicles of the large bowel ulcerate and pus occurs in the stools. We have then a serious condition to combat.

Under ordinary circumstances, if diet be restricted, the little patient begins to mend in from seven to ten days, and slowly the stools resume a normal appearance.

On the other hand, each day may see the condition grow worse: the temperature rises (absorption of toxins), tenesmus is marked, and after much pain small mucous and bloody dejecta occur. These may be frequent, even hourly. Anorexia is extreme, prostration marked, and the child assumes a skeleton-like aspect. In such cases, the urine is greatly diminished and is likely to contain casts and albumin. It is not hard to realize that the organic changes here are profound and recovery is far from probable. Indeed, once such serious conditions obtain, we can expect, even should we be able to control the disease-process, that the child will require close attention for months. In unfavorable cases, death occurs, as a rule, within a month.

Early Treatment Important

Here again early treatment means everything. Modern methods instituted within the first two or three days almost invariably prove effective, but great care should be taken as to the diet for the rest of the year.

As for treatment: High enemata of normal salt solution (or better, still, a calendulated solution of the sulphocarbolates) are essential. For some years I have been utilizing a preparation of calendula officinalis, resorcin, and bismuth, known as calenduline, and in every case results have been ideal. Twice daily the intestinal tube is passed (for the technic, see "Treatment of Acute Gastroenteritis"), and 3 pints of decinormal salt solution or a 1 : 500 solution of the sulphocarbolates, to which 2 ounces of calenduline is added, thrown well up into the colon. After each stool 2 drams of a mixture of 1 dram of aqueous extract of hamamelis virginica and 1 ounce of water should be thrown into the rectum, pressure being made over the anus with a wad of gauze. This alone usually prevents tenesmus, which is very troublesome while the lower bowel is most affected.

Here again extended experience has proved the necessity for cleaning out the alimentary tract with small doses of calomel or else blue mass and soda, followed by a saline purgative draught. As a first step, therefore, order calomel, gr. 1-6, and either irisoid, gr. 1-6, or podophyllin, gr. 1-12, every hour for four doses, and, one hour after the last dose, give a full teaspoonful of effervescent magnesium sulphate. Repeat in forty-eight hours. Give, also, every three hours, hydrastoid, gr. 1-6, hamameloid, gr. 1-6, and one or two teaspoonfuls of a solution of the sulphocarbolates—10 grains to the ounce. Juglandoid, gr. 1-6, occasionally proves more desirable than either irisoid or podophyllotoxin, the indication being marked relaxation and thin mucous stools. Brucine or strychnine will suggest themselves where the disease has progressed debility and is pronounced. In all cases, they will be indicated as alterative tonics during convalescence. Nuclein should be added.

The diet must be light, nutritious, and free from waste. Gelatin, corn-starch, clear soups, albumen-water, jellies, beef-juice, clam-bouillon, and so forth, will afford variety during the acute stage. Arrowroot is desirable, as are also ground lentils.

Nothing known to me equals a gruel made of boiled flour. Tie 2 pounds of dry flour tightly in a piece of linen and boil in plenty of water for five hours. Hang up the bag to dry; remove the linen and split the doughy paste covering the dry flour. Grate fine, as needed, and prepare a gruel in the usual way. This proves an ideal food in all gastrointestinal derangements, and marasmic infants often grow fat on it.

Glonoin and cactoid will prove more efficient stimulants than brandy or whisky, which usually do more harm than good. Atropine or hyoscyamine will, in every case, produce prompt reaction and stop vomiting within two hours. The "calmative" formula already mentioned is ideal here.

Sugar and starchy foods should be given with caution for some time after the bowel has resumed normal conditions; also, it is well to flush the intestines every third day for at least a month. In old-standing cases, it may be necessary to sustain life with small quantities of prepared blood preparations sanguiferrin, bovinine, liquid peptonoids) (predigested cereal gruels, albuminous preparations, barley-water, clam-broth, and zwieback. The latter often will be digested when everything else causes trouble. Massage over the abdomen is of great benefit in all enteric troubles. It should be done with the hand moistened with olive-oil.

In older children, where appetite leaves early and refuses to return, even after everything else seems normal, quassin, gr. 1-3, and nux vomica and capsicum, half a tablet, an hour prior to meals, rarely fails to produce desired results.

Some Medical Experiences

And What I Learned from Them

By J. M. FRENCH, M. D., Milford, Massachusetts

MY FIRST medical experience came to me at an early age. To be sure, it was not medical in the sense of giving medicine, or even advice. I simply refused a call.

Reuben Scribner, a neighbor of ours, who lived, as I remember it, in a little red house out in the field, came to see me one day, and told me that he had been a sufferer for many years from a "fever-sore" on his leg. Having learned that I was a seventh son, and being a man of faith withal, he had come to ask me, as a favor to him, to go to his house and stay there over night, in order that I might be able to come to his aid in the morning, before sunrise, by laying my wonder-working hands on the diseased portion of his anatomy and pronounce him cured. This was the sober proposition of a full-grown man to a little child. It was a great opportunity, although I did not then recognize it.

As I look back upon that episode today, I realize what a grand field of usefulness there was opened up to me! Had I but entered upon and cultivated it, I need not now be making calls at a dollar and a half a call, and thinking myself lucky to get the dollar, let alone the half. The world was open wide before me, inviting me to enter in. It was the call of Opportunity, which, they say, knocks once at least at every man's door. Had I heeded, I might have become a shining light in the great host of Seventh Sons, Sleeping Lucys, Indian Doctors, Hypnotists, Faith-Curers, *et id omne genus*. Fortunately or unfortunately for me, however, I had inherited from the parents whose seventh son I am a strong dislike for that sort of a thing; so I simply declined the call and left my neighbor to live, and suffer, and die, unaided and unsuccored by any alleged mystic powers of mine.

I learned from this experience a lesson concerning the credulity of human nature.

In my school days, I helped take care of a man who was suffering from an unusual form of spinal disease, and who required—or at least received—two quarts of whisky a day to keep him comfortable. Aside from this, the only thing that seemed to relieve his frequent attacks of severe pain was, to have a hard-fisted, horny-handed son of toil thump his spine until the thumper's knuckles were sore, and the patient's back ought to have been but was not. Then a second man would take the place of the first, and the circus would go on.

This man's early death was confidently predicted, and, so, the good lady with whom he lived ordered a coffin for him, had it brought to the house, and stored it in a place convenient for immediate use. But, alack and alas! The fellow confounded the prophets of evil, miraculously got well, and lived for years afterward. Whether it was the thump-

ing that cured him or the whisky, I cannot say neither do I know what ever became of his coffin.

I learned from this experience that it takes a great deal to kill some people.

"The Wilderness of Pills and Powders"

It was during the time I was helping to care for the foregoing man that I read a book written by Dr. William A. Alcott, entitled "Forty Years in the Wilderness of Pills and Powders; or, the Cogitations and Confessions of an Aged Physician." It was a wonderful book—at least it seemed so to me—and did as much as anything (unless it was the talk about the "seventh son") to lead my mind to the study of medicine; although, to be sure, Dr. Alcott was somewhat of a skeptic as to the use of drugs, his stronghold being the idea of removing the morbific cause.

Twenty years later, I came across a copy of this book in a second-hand bookstore in Boston and brought it home with me. I kept it on my shelves, until one day some kind friend borrowed it—borrowed, then carefully forgot to return it. After a while, I hunted all over the house for this book, having entirely forgotten about lending it to someone. I made inquiries among my friends, but none of them knew anything about it, until finally I gave it up for lost. But one fine summer morning, when I was mowing my lawn, a neighbor came down the street with that book in his hands, to give to me: he had just had his annual clearing-out and come across that book with my name in it.

I learned from this experience that men are careless about books they have borrowed.

Curiosity is a Strong Trait

I studied medicine under Dr. Robert L. Flagg, of Jeffersonville, Vermont. He was a jolly, companionable sort of man, who knew how to make himself at home with his patients and at ease in the sick-room. The ability to do these things myself were among the most important that I learned from him. In fact, what I learned from Dr. Flagg was mostly incidental; still, none the less valuable. He loved dearly to have me ride with him, being of the class of men who always seek companionship.

One day we drove up to Belvidere, to make some calls. Now Belvidere is the "jumping-off place." To get there, we had to go some miles up the Lamoille River in the town of Cambridge, then turn off through the village of Waterville (a little hamlet that has turned out more able men than any other of its size that I know of in Vermont), and thence on into the wilderness, where lies Belvidere. Just where we left the broad level meadows of the Lamoille Valley and turned into Waterville, there lived an old Yankee farmer named Jack Page. He was filled with rheumatism and consuming curiosity. So, when he saw us go by in the morning, he felt that life was hardly worth living for him until he should have a chance to satisfy his curiosity concerning the invalids of Belvidere; and all day long he kept his eye upon the road above him, that he might not miss us on our return trip.

Late in the afternoon we rounded the corner, homeward bound. The old man was all ready for the occasion and started out as he saw us coming, leaning heavily on his cane. As we came up to him, he halted us, standing with one hand still leaning on his cane and the other raised in the act of beckoning to us. As we drew up, he asked, with eager interest, "Doctor, who's sick up this way?"

I learned from this experience, and from many others like it since then, that men, no less than women, are "curious critters."

A Peculiar Form of Gratitude

I began my practice among the hills of northern New Hampshire but staid there only a few years. When I was ready to leave, there was one family whom I had allowed to run up quite a good-sized bill—although it was small enough, indeed, for the services rendered. Professional services were not rated at a very high figure in New Hampshire in those days, however it may be now. The hills the doctor perforce must climb are a good deal higher than the bills he dares to render. But the peculiar thing about this particular bill was, that the head of the family not only paid it in full without grumbling, but actually made me a present of a bag of oats to feed my horse on our way to Connecticut, where I was soon to go.

Such conduct was without parallel in my experience. I never had a grateful patient die and leave me his house or barn or purse. In fact, I have always considered myself fortunate if he left me enough of the contents of his purse to pay for my services at the market rate. So, for a long time I indulged my gratitude to this good man for that bag of oats.

Not until long years afterward it finally dawned upon me that, as I was about to set out for Connecticut the next day with my horse and buggy, not to return, this good man was so anxious that I should not fail to get

safely out of New Hampshire and so fearful lest my horse's strength might give out, that he had donated this bag of oats to help keep up the pony's strength on the journey! And so passed away my dream of gratitude.

I learned from this experience that, when a man gives away oats, he generally knows what he is about.

It was a few weeks before this oats episode that I took my first trip down into the Nutmeg State to look up a new location. I stopped off at a little village one day at noon. The sun was hot and the roads were dusty. There was one long, wide street, stretching along the valley of the Farmington River and bordered by magnificent wide-branching elms on either side. Just back of the central portion of this street, extending north and south for a considerable distance, and on a rise of ground which made it quite conspicuous, was an old, large and well-filled cemetery, bearing witness to the successful lives of many generations of medical men.

I walked the whole length of the street and back, and took it all in, including the cemetery. I asked a few questions—a very few—and told the people I'd come to locate. I did, and never regretted it. I wanted a location, they wanted a doctor. It was the only desirable place I ever found in New England where a new doctor was really wanted. This place was a field and a grove, a garden and a lawn, a thing of beauty and a joy forever. I found there two of the best friends of my life, in the persons of two old men of seventy-five or older. To judge by their actions, neither one was more than sixteen. I really hadn't the heart to stay there and try to outlive them.

A Dishonorable Consultant

When I had been in this new place but a short time, I was called one day to the west part of the town, to see a red-headed Irish domestic and found her suffering from a severe attack of malarial fever, which was just then beginning to become prevalent in Connecticut. Paying another visit two days later, I found no longer any symptoms of malaria, but the chest and arms of the patient were covered with a bright-scarlet rash, with minute vesicles on the arms, and the whole accompanied by considerable fever. There was not at any time any noticeable sore throat.

The affection increased in severity, and two days later I called in consultation a physician from the adjoining town, who had formerly treated this family. He was a prominent member of the Connecticut Medical Society and stood high in his profession; facts which I supposed to vouch for his character and ability.

After this doctor had arrived and I had given him a brief history of the case, he entered the sick-room with the air of one whose foot is on his native heath; he looked sharply at the patient for the short space of a moment; felt of her pulse; took a look at her tongue; looked wise for another moment, and manifested some surprise; then, addressing the sick girl, he asked, "Don't you know what you have got?" His tone and manner plainly said, "Anybody ought to know that!" But, no, naturally enough she did not know what ailed her, since her attending physician had not been able to decide the question. "Well," spoke this prince of consultants, still directing his remarks to the patient, "You have got scarlet-fever."

That settled it. Settled me, too. For, was not I the young doctor? Here was ethics for you. No consultation; no attempt at professional courtesy; no deference, even in appearance, to the attending physician; nothing but a bald, blunt, snap diagnosis—scarlet-fever.

To be sure, kind Providence avenged me on mine anniversary and so made the memory of this unpleasant experience a little less unendurable. Three times within the space of three months this girl had scarlet-fever; that is, she had two recurring attacks of what this doctor had diagnosed as scarlet-fever. But, be it stated, each of these recurrences followed upon the same exciting cause—quinine (or other cinchona alkaloid). Each time quinine was administered by a new physician, it was given for the same disease, namely, malaria.

By the time the malarial disease had finally subsided, it was plain to everybody concerned (excepting to my genial consultant, who, so far as I know, never heard anything more about the case) that we were dealing with one of the rarer cutaneous manifestations of quinine.

I learned from this experience that even consultants sometimes make mistakes; also, that not every physician is a gentleman.

A Young Wife's Attempted Suicide

One day my landlord sent for me to come to his house in hot haste. I went quickly, and found that the old man's young wife had become jealous of him and had swallowed a dose of laudanum in revenge. "It was all a mistake. I ought never to have married you. At least I can die and leave you free." This

was the substance of the pathetic letter which the husband found waiting for him on the sitting-room table when he came into the house unexpectedly in the course of the afternoon.

The poor man, who but an hour before had come home from the nearby city with a bouquet in his button-hole which wasn't there when he left home in the morning, took in the situation at a glance and sent for me to help him out. I never told the old man, but I always thought it was a shrewd move on the part of his charming young wife. She didn't take laudanum enough seriously to endanger her life, and the result was, that peace reigned in that household for some time afterward.

I learned from this experience a lesson in domestic economy.

Nephritis and Heart Failure

Come down a score or so of years. Shift the scene to Milford. Time, an hour past midnight, on the 13th of January, 1898. I was aroused from the sweet sleep of the just, by a clanging call from the night-watchman, to go in urgent haste to the top story of Grant block, to attend Mrs. P., an old and superanuated nurse who lived there all alone. I found the old dame apparently nigh unto death, suffering from a severe attack of dyspnea and failing heart, as the result of chronic parenchymatous nephritis with accompanying cardiac dilatation and valvular disease. She was alone and homeless except for this one room, and practically without any friends. Indeed, she was not calculated to make many friends, inasmuch as she was a testy, fault-finding old lady, very exacting in her demands, and never appreciating the favors which were done for her, but always wanting more. She was without means, except a few hundred dollars—a very few—in the savings-bank. She had a mortal horror of "going on the town," and repeatedly implored me not to abandon her to the tender mercies of the town-physician. Yet, the town-doctor would have done all that I did for her, and perhaps more. Enough that I attended her constantly and faithfully for twenty-one long and weary months, at the end of which time she died.

She was one of those patients who require much at the hands of their physician, while they give but little. I furnished nearly everything in the line of medicine and artificial food which she required, for I found that she did not get them unless I brought them to her. Much of the time she was without a nurse, or even an attendant, except someone who came in to look after her once or twice a day.

Under these circumstances, the task of the doctor was not an easy one. Often I had to go on errands for her, in order that she might not lack for the necessaries of life. Much of the time I had to climb the two long flights of stairs which led from the street to her room, as many as four times a day, and not seldom in the night as well. Once during her illness she managed to get herself involved in a lawsuit, and I had to help her out of that also.

When she was so badly off that it was impossible for her to get along without a nurse, it fell to me to look up the nurse and get her there. This was no easy task under the circumstances. A new one had to be hunted up every few days, as no one wanted to have anything to do with her for long at a time. There was one good woman who shared the burden with me, and proved herself so competent a nurse and general helper that I have often had occasion to employ and recommend her since that time. A sister of the patient, who lived near Boston, came once in a while to see her, but they usually got into a fuss every time she came, so that everybody was glad when she left. No other relatives ever came near.

A few days before her death, her sister came again, and when the poor woman was too far gone to resist got her to transfer to herself, what little money she had left in the bank, to be used in paying up the bills. In due time she died—died, and left no mourners.

After she was dead and gone, the sister cleaned up the room and sold the furniture for what she could get. At this time she came to me and asked me for my bill, saying that her son, who was a well-to-do business man, had told her to do so, and that he would send me a check when things were settlde up.

I estimated that at a dollar a visit, not counting the medicines I had furnished, the bill would amount to not less than $540.00. However, I made out a bill for $100 and handed it in. The sister took the money received from the sale of the furniture, also the proceeds of the bankbook, and with it paid "the butcher, the baker, and the candlestick-maker." In other words, she paid the milk-bill, the grocery-bill—there was no drug-bill, for the doctor had furnished the drugs and made no charge—paid every nurse, and, so far as I could learn, paid every bill that was due, save always and only the doctor's bill. That she left for her son to pay.

When she had been gone for several months and I had heard nothing, I sat down and wrote her a letter, reminding her of her promise—and also of several other things. I told her that I was never under any obligation to her sister, except the obligation of common humanity, and that I thought it was proper that the burden of her illness should be borne, at least in part, by her own relatives, rather than that it should fall entirely upon strangers or those who had no interest in her. I suggested that, as she had taken her sister's money to pay the bills with, it was no more than fair that I should have my share with the rest. I reminded her that she had promised to pay me, and requested that she would keep her promise.

After waiting a considerable time, I got the following letter from her son, which I present, *verbatim et literatim*, minus the date and names, as a model of its class.

J. M. French, M.D., Milford, Mass.

Dear Sir:

Yours of the 16th addessed to my mother came duly to hand and in reply say that Mrs. P.——— left nothing except the furniture and household effects the sale of which did not realize enough to pay the necessary bills. Now regarding the bill which you have rendered say that neither my mother nor myself feeled called upon to pay the same, consequently shall not do so. Furthermore I am fully aware that it is customary for physicians in "good standing" to furnish medical advise to nurses without charge. Trusting I have made myself clear in the matter I am

Respectfully, ———————

I gained from this experience a very comprehensive but entirely valueless knowledge of the ingratitude of human nature.

Pyuria

By P. T GEYERMAN, M. D., South Dakota

THE presence of pus in the urine frequently is misinterpreted, while its source sometimes is difficult to determine, although we are able to do so virtually in every instance if a proper procedure is followed and sufficient time is devoted to details. Modern appliances and instruments have almost revolutionized the diagnosis and treatment of diseases of the genitourinary organs and have made this field of special work a definite one.

Method of Diagnosis

The cystoscope, urethroscope, and radiography have each contributed their share in making correct diagnoses. The catheterizing cystoscope, especially—which enables us to pass catheters directly from the bladder to the kidney without contamination from the other side or allowing the urine to come in contact with the bladder wall—has enabled us to differentiate definitely between lesions in these organs as well as to treat them properly.

It has been said that the cystoscope has done for these organs what the ophthalmoscope has done for the eye, and a better comparison would be hard to imagine. However, its use must be properly restricted. In general, it might be said that all subjects having a chronic infection should be cystoscoped, especially if the disease has resisted treatment for any length of time. All acute cases, unless there is some good reason for it (such as a suspicion of stone, tumor or kidney infection), are best treated without using the instrument.

The urethroscope is particularly adapted for the examination of the urethra. That portion of the urethra which lies just in front of the bladder and is surrounded by the prostate gland is best examined with a urethroscope having a prostatic curve, this allowing the introduction of the instrument with greater ease and less discomfort to the patient.

Many vague symptoms, both local and reflex, are due to lesions in this region, and particularly so if they involve the colliculus. Normally the colliculus is of a deep-red color and about the size of a split pea. It is really a portion of the prostate gland, and the ejaculatory ducts open out on either side of it.

Where this latter organ is in a state of chronic inflammation or covered with granulations, the patient is likely to be neurasthenic. Many of the subjects complain of general as well as of local symptoms, such as discomfort in the perineum or of suprapubic pain and aching. The general symptoms are those common in neurasthenia or nervous breakdown, and it is quite probable that a majority of neurasthenics have some local lesion in the prostatic urethra. This condition has its etiology either in infection (usually gonorrheal) or repeated congestions in this neighborhood, and pus can be demonstrated in the urine of a considerable proportion of the patients.

Sometimes pus is discovered accidentally in routine examinations, such as for life insurance or for other reasons where a complete examination is made. As a rule, when there

is any considerable pus in the urine, patients have some complaint to make and they seek advice because of the accompanying symptoms. An occasional leukocyte or pus-cell in the urine does not mean that it contains pus sufficient to be pathological. After centrifuging, there must be a considerable number before we are justified in recommending further examination with instruments.

The Examination of Urine

Given a specimen of urine, it is better to use a centrifuge than to allow it to sediment in a glass, since changes will take place in the latter that alter the character of the cellular elements and interfere with a proper examination. Besides, decomposition of the urine also changes its reaction. If we find pus, we are able to determine its source, to a certain extent, from the character of the accompanying cells.

To illustrate: If the irritation is high up, that is, in the kidneys and ureters, the columnar type of cells is predominant; while the cells from the bladder and urethra are of the flat or squamous type. In this way we are sometimes assisted in determining the course of future procedures. The reaction is also of some importance; pus in an acid urine is quite likely to come from the kidneys, as the changes in the bladder, when the latter is involved, render the urine alkaline. However, the kidneys and the bladder may be involved at the same time and then the reaction is of no importance. These are merely aids and are not to be relied upon for definite diagnosis.

Among the more important conditions causing pus to be present in the urine (leaving out acute gonorrhea), we have chronic inflammatory conditions of the urethra, and nearly always gonorrheal. Occasionally we find infections of the urethra due to other organisms, especially the catarrhal form of organisms, as the micrococcus catarrhalis. The latter organism can be distinguished from the gonococcus by staining and culture methods. Mixed infections are, of course, common. These nearly always are subsequent to gonorrhea, but the gonococcus has ceased to be a disturbing factor.

Prostatitis

Acute and chronic prostatitis are frequently met with, especially the chronic form. In these cases, the prostatic urethra is infected, the pus runs backward into the bladder and becomes mixed with the urine. Here the three-glass test is of great value. The procedure is as follows: The patient first urinates into two glasses, leaving a small portion of urine in the bladder. The prostate gland then is massaged and the remaining urine in the bladder is then emptied into the third glass.

The indications are now quite clear. If only the first urine contains pus and shreds, the anterior urethra alone is involved; if the first two glasses contain pus, the posterior urethra also is involved; if all three glasses contain pus, the prostate gland is an accompanying factor in the case. If the third glass is free from pus, the prostate gland is not infected.

Senile Hypertrophy

In senile hypertrophy, we have a retention-cystitis due to the inability of the patient to empty his bladder; completely or, in other words, there is a partial obstruction to the free passage of urine, which is one of the most frequent causes of bladder infection. In such cases, we allow the patient to empty his bladder as nearly as possible and then catheterize and determine the amount of residual urine. If the patient has residual urine, we have a sufficient cause for the pyuria.

It is well to cystoscope the bladder here, to determine whether or not there are complications present such as stone or possibly tumor formations. The cystoscope also gives one a correct idea of the intravesicular portion of the prostate gland.

Cystitis

Excepting in very acute cases, the cystoscope should be used whenever there is cystitis. In fact, this is the only accurate way we have of getting definitely at the cause. In the primary cases, this may not enlighten us very much as to the causation; still, two things are gained by the examination, to wit: First, as to treatment. The local lesions will guide us as to proper medication as well as directing applications to the diseased wall. Second, we have eliminated causes that may be removed, such as stone, tumors, and so on.

In the extremely acute cases, it is best to treat the condition for a time and allow the acute symptoms to subside before inserting the instrument for inspection of the interior of the bladder. In all forms of cystitis not due to hypertrophy of the prostate gland or some other well-determined cause, we are positively in the dark as to the cause, and, if allowed to go on, great harm may be done the bladder. This is too often true of cases

due to stone or tumor. A stone which has been lodged in the bladder for a long time produces changes in the bladder walls that can never be entirely overcome, because of thickening and contraction, while tumors destroy the bladder walls themselves and malignant tumors go beyond help in a short time.

Many of these cases begin with a slight irritation, which gradually becomes worse, until the patient presents himself with severe symptoms; or the symptoms may be of a mild nature for a long time and then suddenly become serious.

The symptoms of the more common affections frequently are misleading; and, again, the classic, or textbook, symptoms generally are wanting in these more common conditions involving the bladder. Indeed, many textbooks are nothing more than copies from those previously written and at a time when accurate diagnosis in genitourinary affections was at a low ebb. This often is true of stone in the bladder, as I have demonstrated a number of times, wherein the symptoms complained of by the patient were not even suspicious of this condition, and but for the cystoscopic examination I might have overlooked the true cause and applied the wrong treatment.

Searching for stone with a sound or a stone-searcher is inaccurate, and, when negative, is of no value; besides, the bladder walls may be injured by this method. The x-ray is of value and can be relied upon when positive, but not always when the plates are negative, as all stones do not throw a shadow. However, it is a valuable adjunct to cystoscopy, especially if we suspect stone in the kidney or ureter. Nephrolithiasis, pyonephrosis, pyelitis, urethritis, hydronephrosis, and neoplasms are all sources of pus in the urine.

It is rather surprising what a great number of infected pelves one finds when looked for. The urine should be collected from both kidneys separately and examined for pus in all cases that do not clear up under treatment directed to the urethra and bladder.

Kidneys

In considering the cause of cystitis, we must not forget the kidneys. Quite often cystitis is due to a descending infection. This we occasionally find following the pyelitis of pregnancy. The kidney becomes infected during pregnancy from interference with drainage, due to pressure in the abdomen. This is most likely to occur near the end of gestation.

The pelvis of the kidney becomes infected first, and, if not relieved, the kidney substance itself will become involved, producing a pyonephrosis. The bladder in such cases becomes infected, and the patient complains mostly because of the bladder symptoms. In fact, the bladder exhibits symptoms before infection of this organ takes place, and, unless great care is taken, the symptoms of the real disease are neglected, and destruction of the kidney goes on until all further function is lost.

If the cause is suspected and the focus of infection treated by means of direct lavage to the diseased pelvis, the outlook is good for cure, providing the obstruction to drainage is removed and the bladder will get well when the pelvic and kidney infection are relieved.

Tuberculosis

Tuberculosis of the kidney is also a frequent source of bladder irritation, and the patient is very likely to complain of frequent urination for some time before the general health becomes notably impaired or any marked changes take place in the urine. To determine a tuberculous infection of the kidney sometimes is difficult, and to determine it early is even more so, although eminently important to the patient.

Separating the urine by means of the urethral catheter and examining for pus and tubercle bacilli are the most efficient means we have. The demonstration of the bacilli is especially difficult, but if carefully and persistently looked for they can be found in fifty to seventy-five percent of the cases. If guinea-pigs are at hand, an inoculation may be made, which, if positive, is very valuable in completing the diagnosis. The early excision of the diseased kidney is the only hope for cure, as a wide-spread infection of the genitourinary tract will eventually take place unless the primary focus is removed.

However, we must remember that tuberculosis of the genitourinary organs is nearly always secondary to a tuberculous focus in some other place. Unless we are sure of an ascending infection from the bladder or urethra, or unless the patient has or has recently had an infection of these organs, we should be very suspicious of tubercle infection of the kidney when we find pus coming down from one side, and it is our duty to use every diagnostic aid available to make a proper diagnosis.

Of course, neoplasms and hydronephrosis should be considered in this class of cases. Hydronephrosis can be determined by measuring the capacity of the kidney pelvis and by

radiographs of the pelvis filled with collargol. Neoplasms usually bleed early, and we may be able to palpate them.

If we are to care for patients who come to us presenting lesions of the genitourinary organs, we must be prepared to use all the available modern scientific methods that have proven of value in the diagnosis and treatment of these organs. We should not allow ourselves to guess, when a means is at hand by which we are able to eliminate this uncertainty. I do not mean that each and every case can be correctly diagnosed. But, unless the physician is prepared and willing to use modern means to this end, I venture to say that the great majority of people having diseases of these organs will not have a correct diagnosis made.

There is no other class of diseases where accuracy is of more importance or, I may be permitted to say, of as much importance. If the proper diagnosis can be made and a corresponding treatment instituted, we are quite likely to be gratified with nice results, and our patient saved from suffering; while the contrary will, quite likely, give results that will be very much regretted by both patient and physician.

An Operation For Parotid Fistula

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of "The Diseases of Society," "The Blood of the Fathers," etc.

IN February, 1900, I published in the *International Journal of Surgery;* the report of a case of fistula of Steno's duct operated upon by a method devised by myself. The case, in resumè, was as follows:

Case 1: A young man 26 years of age, under treatment for syphilis, was referred to me for diagnosis and for removal of a tumor in the left parotid region. The tumor was about as large as a pigeon's egg, fluctuating, but firm to the touch, and on aspiration was found to contain an opalescent, somewhat viscid alkaline fluid of the consistency of syrup. The cyst was evidently salivary in origin, although ptyalin was absent, as is likely to be the case in salivary cysts of long duration. The cyst had been in process of formation for three or four years, and was slowly increasing in size. There was no definite history of traumatism, but the patient had an indistinct recollection of a blow received upon the cheek some years before the tumor appeared. Extirpation was advised and consented to.

Operation: There were no features of interest in the operation. The cyst was extirpated cleanly and with no special difficulty. The day after the operation the patient complained of a flow of fluid from the wound that saturated the dressings and ran down upon his face and neck, soiling his clothing. Examination showed a profuse flow of saliva from the wound. Steno's duct had either been wounded, or, what seemed more probable, the cyst had involved a portion of the parotid close to the duct. As was to have been expected, a salivary fistula resulted. This I closed by my method shortly to be described, about six weeks after the primary operation. I have no means of knowing whether my method has been used by others, or, if it has been employed, with what success. My own opportunities for repeating the method have been meager, and I have subsequently had but two cases of a similar character. Both of these, however, were operated upon successfully by my method.

Case 2: A woman thirty years of age consulted me for a parotid fistula on the left side resulting from a stab wound said to have been inflicted accidentally with a pair of scissors, six months previously. The fistula was small, but gave exit to a continuous flow of a considerable quantity of normal saliva. There evidently had been little if any infection following the wound. Operation was followed by complete and permanent closure of the fistula.

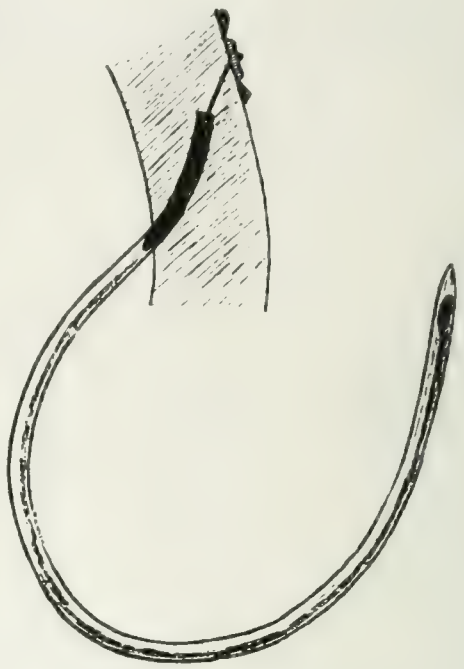
Case 3: A man, forty-five years of age, giving a definite history of syphilis presented himself with a fistula in the right parotid region. This had resulted, it was claimed, from a small abscess which had occurred three months previously. The syphilitic history and the appearance of the cicatrix, however, led me to suspect a gummous syphilide. Mercury had recently been given to the point of tolerance, and the Wassermann test proved negative. One week after an intramuscular dose of salvarsan I closed the fistula, after removing the cicatricial tissue about it. The result was perfect, and at present writing, four weeks after the operation, the fistula remains soundly healed.

The technic which I employed in these cases was as follows:

The edges of the fistula were first freshened; a moderately sharp-pointed, eyed steel probe was then threaded with a heavy silk ligature and passed obliquely downward and inward through the tissues of the cheek into the mouth. The probe was made to traverse as nearly as possible the line of Steno's duct, emerging at its orifice. The probe was drawn out at the mouth, leaving the ligature traversing the tissues of the cheek and emerging from the corners of the mouth. To the cheek end of the ligature was fastened a No. 12 F. soft rubber catheter. This catheter was now drawn through the cheek and made to replace the ligature, likewise emerging from the corner of the mouth. To the proximal end of the catheter was affixed a fine silver wire suture in such a manner that, while it served as a suspensory suture, it did not occlude the catheter. The silver wire was so twisted upon itself close to the catheter that only a single strand protruded. The catheter was now drawn upon in such a manner that the cheek end disappeared in the tissues for a distance of about half an inch, leaving the single strand of silver wire protruding from the fistula.

The fistula was next stitched with fine catgut, about the single strand of silver wire, and the wound sealed with iodoform collodion. The strand of silver wire was now passed through several layers of iodoform gauze, and finally through a small lead plate, to which it was firmly secured. The free end of the catheter was next anchored loosely with a strand of ligature-silk, extending from the eye of the catheter to the lead plate. This, to a certain extent limited the movement of the catheter, and kept it out of harm's way. It would have been as well, perhaps, to have anchored the ligature by a piece of rubber plaster upon the patient's face or neck.

By the arrangement described, the saliva was afforded a means of escape, which relieved all pressure in the direction of the fistula. Saliva flowed so freely through the "countersunk" catheter immediately after the operation that it was necessary to catch it upon a pad of absorbent cotton. Not a drop of saliva subsequently escaped through the fistula. At the end of ten days the suspending wire was cut, and the catheter and lead plate removed. The dressings were allowed to remain three or four days longer. Upon their removal the fistula was found perfectly healed.



Doctor Lydston's method of anchoring the catheter

The saliva subsequently found egress into the mouth, from the normal orifice of Steno's duct.

The foregoing operation, aside from its features of originality, has a simplicity and directness possessed by no other operation for salivary fistula. It is, of course, admitted that the operation is not available for some of the more complicated varieties. I advance it merely as an operation for simple parotid fistula. More extended experience, however, may show the applicability of its principles to other forms.

Internal Versus Hypodermic Medication

By GEO. L. SERVOSS, M. D., Gardnerville, Nevada

UNTIL within very recent years, it has been the practice to administer most drugs by mouth, and even today this is the prevailing method; and, indeed, the majority of our remedies can be used in this manner, the results following quickly and satisfactorily. Within the past decade, however, much attention has been given to the introduction of remedies subdermally, intravenously, and intramuscularly by means of the hypodermic syringe, and these parenteral modes are gaining in popularity rapidly as their advantages are becoming recognized.

However, certain drugs and chemicals when given by the mouth lose much of their worth, for one reason or another. In many instances there is faulty absorption, either gastric or intestinal, and the medicinal agent passes through the alimentary tract, practically without result. Also, when drugs are administered in this manner, the condition known as idiosyncrasy is met with in some instances, and the drug either has an unlooked-for action or is rejected. Some drugs and chemicals produce other than the desired effect when taken by mouth. Thus, for instance, iron, while more or less of it may be absorbed, is liable either to constipate the patient or to irritate the stomach to such an extent as not to allow enough of it to be employed or to be administered over a sufficient length of time to gain the desired results. Other agents act in this or in some other manner to such an extent as practically to prohibit their continued use internally.

The question of absorption enters into the problem in every instance and is one of the greatest importance. Does the patient get sufficient of the medicament employed? Is there any assurance of a proper active dose when drugs are exhibited by the mouth? Is it not possible that some failures are due to the last-named cause? I do believe that they are.

Active-Principles And Other Agents Adapted To Hypodermic Use

Time was, and not so very many years ago, that it was practically impossible to employ more than a few of the plant-drugs in any other way than by mouth. Today, however, with the active principles of these plants extracted and isolated from the other plant contents, we have agents which are of absolute chemical purity and in such form as to be employable hypodermically. Consequently, when results are not forthcoming by the internal method, the hypodermic should be employed.

Until within recent times, morphine, strychnine, atropine, and a few other alkaloids were the only agents administered hypodermically. Today we find a list running up to fifty alkaloids mentioned for hypodermic use, some of them exclusively so. Numerous other remedies of this character are also suggested as applicable in this manner. In addition to the alkaloids, we find several of the entire-plant products employed in a similar manner. Among the more important are, probably, ergot and lobelia, which are both in everyday use hypodermically.

Added to the alkaloids and other plant products employed in this way, we find a legion of chemicals which have been so manipulated as to allow of their hypodermic use. Among this latter class we find various forms of arsenic in combination with other chemicals. Camphor dissolved in oil is so used. Iron, combined in organic form, is found more efficient than the older forms given internally. Under the later methods of treatment of syphilis, mercury, in addition to salvarsan or other arsenic compounds, is given in the form of one of many salts of the metal. Sodium glycerophosphate also is given hypodermically. In fact, the number of chemicals so used seems limited only through the lack of their being prepared in proper form for subdermal use.

Since the discovery, by Wright, in 1900 or thereabouts, of the efficiency of the bacterins, the use of the hypodermic syringe has gained by leaps and bounds. This class of agents, although endeavors have been made to prove the contrary, have been found practically inert when exhibited orally, but very efficient when administered hypodermically. Serums and antitoxins have been found inactive by the mouth, but very active when the hypodermic mode has been adopted. Consequently, the great necessity for the instrument has been observed more than ever.

Advantages of The Hypodermic Route

In the application of drugs and chemicals, the hypodermic syringe and method are valuable for two reasons. In many in-

stances, as in the use of morphine for the relief of pain or spasm, quick action follows the subdermal injection of the drug. In the treatment of internal hemorrhage with atropine, we, again, obtain quick results. On the other hand, there are some agents which are absorbed less quickly when administered intramuscularly; but this slow absorption may be desired. Among such are salvarsan and other arsenic compounds, the organic salts of iron, and other chemical agents. Consequently, the hypodermic method has a double value.

As a rule, when drugs or chemicals are employed hypodermically, we have warrant for all practical purposes, that the full dose administered will be absorbed. There is no such warrant when medicinal agents are given by the mouth. When the latter method is employed, we find the patient vomiting very shortly after each individual dose, with much loss of the agent employed, in all probability. In other cases, either the stomach or bowel may refuse, almost absolutely, to absorb the drug. In the latter instances, we know nothing as to how much of the drug has been taken into the system, and, so, are at a loss to know just what results to anticipate.

There are one or two agents which are absorbed from the buccal cavity, among them nuclein and nitroglycerin, the latter with as great rapidity as when given hypodermically. There are some agents which have contrary effects by the different method of application. Apomorphine, hypodermically, is a prompt gastric evacuant; by the mouth, it very frequently happens that not even nausea follows its use, it acting in this method of administration, as an expectorant rather than an emetic.

From the foregoing it is readily seen that, when it is possible to employ a drug hypodermically, much better results as a rule obtain than when the same agents are exhibited orally. Not only is this true, but in many instances the amount of drug or chemical required to obtain the desired result is much less by the first-mentioned method. There is a practical assurance of no drug loss with the hypodermic method, while there is no such thing in the case of many drugs when employed internally. Consequently, the matter of dosage is settled to a fine point for the hypodermic method. To my mind, whenever it is possible to employ the hypodermic method, it should be used by preference.

Refraction for the General Practitioner

By THOMAS G. ATKINSON, M. D., L. R. C. P. (London), Chicago, Illinois
Author of "Essentials of Refraction"

Subjective Refraction Tests

WE NOW come to the subjective method of testing refraction. This test depends upon the acuteness of vision. Not that it is in any sense an estimation of visual acuity; but we utilize the visual acuity, as a known and definite quantity, by which to estimate the refraction as an unknown and indefinite one.

First of all, we make certain (in a way that I shall explain in a moment) that the visual acuity of the eye is normal; then we create a set of conditions under which an eye with normal acuity and normal refraction ought to be just able to see and interpret the test-object. The result is that the ability, or the inability, to do so rests entirely with the refraction.

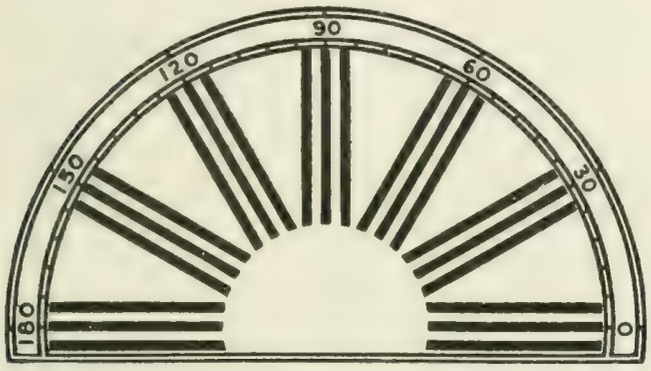
The mechanism of the test involves the application of two optical principles, viz.: that of the parallelism of rays, and that of the minimum visual angle.

We already have seen that the dioptrism of the normal eye is such that, with its accommodation at rest, it is able to focus parallel rays of light exactly upon its retina, and thus, so far as its refraction is concerned, to obtain a clear image of the object from which such rays proceed. We also have seen that an object must subtend a minimum visual angle of 5 minutes in order to be perceived by an eye with a normal acuity of vision. (Strictly speaking, of course, this is a function of the brain, but it depends upon the propinquity of the rods and cones, so that practically we may refer to it as a function of the eye.) If, therefore, we arrange it so that rays of light from an object fall upon the eye in parallel groups, and so that the object subtends the minimum visual angle of 5 minutes, then, if the refraction of the eye be normal, it will be able to see the object clearly; but if there be the least error of refraction the image will be blurred.

These, then, are the conditions which we create for the purpose of making the subjective test. The object, or objects, employed generally are letters of the alphabet, because

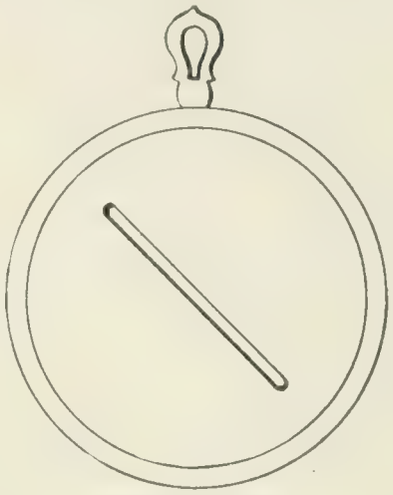
they constitute about as delicate tests of perception as we have; but they need not necessarily be letters, and, in fact, we are obliged to use other objects when the individual can not read. The important points are: first, that they be of such a size, both in vertical and lateral dimensions, as to subtend, at the distance at which they are viewed, the minimum visual angle of 5 minutes; and, second, that they be at such a distance that the rays of light reflected from them fall upon the eye in parallel groups.

The first of these two requirements is provided for in the test-charts furnished us by the optical houses, wherein the letters are accurately scaled to this angle and marked for the distances at which they are scaled. The second is fulfilled by placing the chart at a distance from the eye that will insure parallelism of the rays which proceed from it; that distance, as we know, being 6 meters (or 20 feet).



The Test Applied

Having, then, a test-chart hanging on the wall in a good light, we seat the patient 6



The stenopaic slit

meters (or 20 feet) away, straight in front of it, and direct his attention to the line of type marked No. 6 or No. 20, as the case may be. If he can read it clearly, it is evident that his refraction must be either normal or else hyperopic. If it be normal, he is reading it without any accommodation. If hyperopic, he is using some accommodation in order to get clear vision.

How shall we determine whether he be normal or hyperopic? Very simply, indeed. By merely putting up before his eye a weak plus lens, say, a 0.50 D. If he be normal, this lens will immediately blur the type, for it will bring the focus a little forward, and, as his accommodation is already as relaxed and his crystalline lens as shallow as he can possibly make it, he cannot bring the focus any further back. If, however, he be hyperopic and is using some of his accommodation, as soon as the plus lens is put before him and the focus is moved forward, he will promptly relax the accommodation he is exerting, flatten his crystalline a little more, and again bring the focus on to his retina, so that the image will not be blurred. So, then, if a weak plus lens blurs, his vision is normal; if it does not, he is hyperopic.

But suppose that with no lens at all before his eye he can not read the type. In that case he either is myopic or astigmatic—perhaps both—or else his visual acuity is below normal, i. e., there is something the matter with his retina.

We proceed at once to determine this latter possibility by putting before his eye what is

called the pinhole disc, an opaque disc with a pinhole bored in the center. This has the effect of keeping out of the eye all light-rays except the central ones, which fall on the yellow spot; and, inasmuch as these rays do not undergo refraction at all, his vision will be considerably brightened by this procedure. But, if there be an organic disease of the retina, it will not improve his vision to cut out the refracted rays; on the contrary, it generally will make it worse, because the yellow spot as a rule is worse diseased than any other part.

Assume, then, that the pinhole disc does improve vision. Then he is either myopic or astigmatic; and we must proceed to find out which of these two errors exists, and what is the degree of error.

Let us now go back to the point where we discovered, by means of the weak plus lens, that our patient was hyperopic, and ascertain the extent of the hyperopia. This is a very simple procedure.

Determining Degree of Hyperopia

We immediately place in the trial-frame a strong plus lens, which will completely "fog" his vision; and then we gradually reduce it, by mounting stronger and stronger minus lenses in front of it, until we find the point where he can just read the required line of type. The resultant plus correction is the measure of his hyperopia and of the strength of glasses that he needs.

Thus, we put up a plus 4 D., and gradually reduce it with minus lenses, until a minus 2 in front of the plus 4 enables him to read the line. Then plus 2 D. is his correction. We fog first, and gradually reduce, rather than gradually increase the plus correction, because it is easier to coax his ciliary muscle to contract than it is to coax it to relax; so, we force complete relaxation to start with, and gradually come down to a point where he can just read—a fraction beyond that, and he would begin to accommodate.

So much for simple hyperopia, which is the most frequent error, and the simplest to correct. Now suppose we have discovered that our patient is either myopic or astigmatic.

Our first care now is, to determine whether there is any astigmia. To do this, we direct his attention to the fan-wheel at the top of the chart. If he is astigmatic, these fan lines will not all look as black as one another to him; one meridian will stand out more clear and black than the rest. In that event, we proceed at once to the stenopaic slit test.

In the trial case will be found an opaque disc with a small longitudinal slit in it, and this we mount before the eye. This has the effect of cutting out all the rays except those which enter in one meridian, and by it we are enabled to test the refraction of each meridian of the eye separately. We revolve this slit in the trial-frame, until we get it at an angle which gives the patient the best possible vision of the type. (This need not be perfect vision, but the best obtainable.) This shows us the best meridian of refraction. If this vision be normal, the astigmia is a simple one, existing only in the other meridian. But, if it be not normal, we proceed to make it normal by putting up before the slit plus or minus lenses, as may be required, until we get normal vision. (Make a note of this correction.) We then revolve the slit to the meridian at right angles—that will be the meridian of worst vision—and proceed to bring that up to normal in the same way. The degree of astigmatism will be the difference between the two meridians: and, if the best meridian had an error, it will need a spherical correction of the kind and degree of that error in combination with the astigmatic correction.

For example. Suppose the slit at 90 degrees gives best vision, and this vision is normal. At 180 degrees, vision is worst, and requires plus 1 D. to make it normal. This patient has a simple astigmatism of 1 D. in the 180th meridian and no error in the vertical. His correction will be the difference between 0 and 1 D., i. e., 1 D. in a cylinder, with its axis at right angles to the faulty meridian, or, at 90 degrees.

Suppose, again, that the slit at 90 degrees gives best vision, but this vision requires a plus 1 D. to make it normal. At 180 degrees, the worst vision requires plus 2 D. This patient has a compound hyperopic astigmatism of 1 D. in the vertical and 2 D. in the horizontal meridian. Now, if we take a cylinder of the difference between these two meridians, i. e., of 1 D., and put it at right angles to the worst meridian, we shall have brought it up to the same degree of error as the best. Both meridians are now 1 D. hyperopic; but that means there is now a spherical error of plus 1 D.; so, we add plus 1 D. sphere to the correction, and the whole eye is made normal.

Once more. Suppose that with the slit at 90 degrees vision is at its best, but it requires a plus 1 to make it normal. At 180 degrees, with vision at its worst, it needs a minus 1 to make it normal. Here we have a mixed

astigmatism of plus 1 in one meridian and minus 1 in the other. We follow precisely the same rule, except that in this case we correct the best meridian instead of the worst, on the plan (previously explained) of always correcting with plus cylinders. A cylinder of the difference between the two meridians, namely, of plus 2 D., placed at right angles to the vertical meridian, will overcorrect it so as to make it equal to the horizontal. Both are now minus 1 D., and a minus 1 D. sphere will complete the correction.

The rule, therefore, is very simple. One does not really need to bother his head about simple, compound, and mixed astigmatism at all. Find the correction necessary to bring each chief meridian to normal; apply a cylinder of the difference between them, at right angles to the least convex meridian; and the balance will be purely spherical correction. In simple astigmatism, of course, there will be no "balance;" hence, no sphere will be necessary.

If there be no astigmatism, but only myopia, the correction is as simple as that of hyperopia. In that case, we simply mount successively stronger and stronger concave lenses before the eye until the patient sees clearly. In this procedure, however, we do not stop as soon as he can just read the letters, as we did in hyperopia, but crowd on the minus correction until we almost overcorrect; the object in each case being to incite the accommodation to do its own work.

But by far the simplest method of estimating astigmatism is by means of the Ophthalmo-Axonometer, already referred to in these pages (see page 543 in June number). With this instrument, we simply find, on the sliding-bar, the scale at which the most convex meridian is best seen, and make a note of it; we then slide the dial-chart along until the other meridian is best seen, and make a note of that; the degree of astigmatism is the difference between the two, to be corrected with a cylinder of that strength, with its axis at right angles to the first-found meridian.

Cardinal Points to Remember

Always have a good light in making type tests. Daylight is best; but artificial light is better than poor daylight.

Always test each eye separately, by each method, excluding the other eye meanwhile by means of an opaque disc.

Always begin with convex lenses. They relax the ciliary.

Never be satisfied with one kind of test. Confirm it by other methods.

Have a system and follow it out. Nothing weakens a patient's confidence and confuses the refractionist like aimless pottering.

Some Accuracies of Practice

The Correlation of Precise Methods of Diagnosis and Treatment

By B. G. R. WILLIAMS, M. D., Paris, Illinois
Author of "Laboratory Technic for Practitioners"

EDITORIAL NOTE.—With this article Doctor Williams' series is brought to a close. However, we shall hope to be favored by the doctor with many more contributions in the months to come.

IN GLANCING down the classified advertisements of the medical journals of the future, we shall doubtless read notices something like the following:

> Wanted—A Barber-Surgeon—A man who can perform most of the technical cutting operations is desired by a busy diagnostic nurse. Applicant must be single and furnish proper references. Board and laundry will be allowed, not to speak of the experience. Must be able to read German and French; also, to write articles to which my name can be signed, such articles to appear in diagnostic nurse-journals. Must be able to perform cranial, mastoid, and thoracic operations and all other routine technical procedures common to a surgical laboratory. In case any knowledge of medicine is shown at the end of ten years, successful applicant will be given opportunity to do some diagnostic work. State experience. 97673A.

Sure thing! It is merely a question of supply and demand. The operator now demands the diagnostic nurse—the maiden who can do the bacteriologic, blood, gastric, urine, serum, and tissue analyses (all these minor little stunts), and advertises in our medical journals for such girlies; diagnosis nowadays being quite a matter of nonmedical technic. But these are the days in which, according to our hospitals (where medicine is at its best), diagnoses are correct in twenty-five percent of all cases.

The opportunity for the nurses is one not to be despised, and this demand will be met eventually, doubtless more than met. For, meanwhile many of these operators will become discouraged, because they can secure none of these diagnosticians, and will give

up the struggle, selling fruit-trees or vacuum-cleaners for a livelihood. And, so, when the nurse-universities turn out their sweet girl graduates, they will find a dearth of technicians prepared to remove appendixes, gall-stones, ingrowing toenails, and all that. Be ready, brothers, to fill in this gap.

"Ahem! Owah pawthologist opines that this tissue is not malignant! So, let us proceed to remove the offending organ. Ahem! Won't someone please hit Williams with a brick?"

The Colon Bacillus at the Bar

Pug Andrews is a respected citizen. He votes, pays his taxes and is scarcely known to the cops. But some dark night he is caught climbing a porch. He may have done the trick many times before and got by with it, but now he is forced to face the music. But what for Pug is much worse than the punishment for the single offense is his loss of prestige. His photo goes into the rogues' gallery and his history into the memories of the police. They all know him now. Let another stunt of the same sort be pulled off, and it looks very much "like his work." Indeed, he must be prepared with many a good alibi in the years to come.

And so it is with the colon bacillus; everybody's down on him nowadays. Perhaps he stands for many sins not his own, but he does deserve much that is coming. Time was when the ubiquitous staphylococcus bore the blame for all urinary infections where the sweating-process could not force confession from the sneaking rod of Koch. But later it was learned that Monsieur Colon Bacillus, a fairly well-behaved germ when residing in the large intestine, often wanders to other portions of the body, and upon such occasions quickly forgets his manners and gets into mischief. In other words, as one man has put it, a colon bacillus is not a colon bacillus when located in some anatomical region other than the bowel.

We cannot go into the morphological, staining, and cultural characteristics of the colon bacillus, in an article of this scope. Suffice it to say that the diagnosis must be based upon more than the mere finding of rods in the urine.

From a clinical standpoint, the colon bacillus may be defined as that microorganism most likely to cause pyelitis in young girls and perineal infections in old men. The first group of cases is the large one. All women, but especially girls, are subject to these infections. Invariably the renal pelvis rather than, or rather in addition to, the bladder, is involved. In other words we have to deal with a pyelitis or pyelocystitis, rather than with a simple cystitis. There may be no local symptoms, but chills, fever, and sweats. An examination of the urine may be neglected and a diagnosis delayed or never made. In other cases there may be symptoms in the region of the kidney. In the greatest number of instances, the bladder symptoms are the prominent ones.

Once thought to be ascending infections, we now doubt this. There are many reasons for this change of opinion, but two are very convincing. 1. These infections appear to be no more frequent in women after confinement than at other times. 2. The colon bacillus at the anus is much less likely to become exalted than when higher in the bowel. In fact, we know that perhaps more than three-quarters of all the bacteria in the feces are dead by the time the anus is reached. The colon bacillus must be exalted sufficiently to survive the bactericidal action of the blood in order to produce pus where it finally entrenches itself.

Colon infections may occur in the tissues as well as in the mucous membrane of the urinary tract. In the former, we note a phenomenon that rarely is seen in the case of colon urines: I speak of the diagnostic value of the colon odor. The bacillus has much to do with the decomposition of proteins, and the fetor may approximate very closely that of neglected fecal material.

In this connection, there is another point that has appealed to me as one of prognostic value: these exudates may remain quite odorless until toward the end of the disease. This may be defined as a farewell odor, meaning, doubtless, that the bacillus has made his last stand. Not only has he lost those properties (pathogenic) which were given him by exaltation, but, dying, he hopes still to live, being content with saprogenic functions.

Of course, many other types of pus are foul, but the colon bacillus seems to have them all bested. In other words, according to the old slang, the colon odor is "some odor," and one which might cause the proverbial and esthetic canine to retire hastily from the vehicle of putrefactive intestines.

Treatment of Colon-Bacillus Infections

To whip the colon bacillus, we must know something of its habits and weaknesses. The colon bacillus does not thrive in an alkaline medium; and, so, the urine should be rendered and kept distinctly alkaline, is the

advice offered by Marsh and others. The colon bacillus is quite easily embarrassed by the use of urinary antiseptics, and this has given rise to another line of treatment. These two modes of attack cannot well be combined (antiseptics acting less well when given with alkalis); but they may, with profit, be alternated in certain cases, inasmuch as one line of treatment may aggravate and cripple but not destroy the guilty rod. We have found that in spite of all treatment some of these cases become chronic, long periods of quiescence alternating with acute or subacute exacerbations.

So far as the alkaline treatment is concerned, Marsh and others advise large dosage either of the citrate or of acetate of potassium, or of the carbonates. The dosage will depend upon the intensity of the acidity. The object is, to render the urine alkaline and keep it so for considerable periods of time. The citrates are most efficient, but often give rise to digestive disturbances. In such cases, it is well, as soon as the urine is rendered alkaline, to change to the carbonate or bicarbonate.

So far as the antiseptic treatment is concerned, the urine must be acid before hexamethylenamine is given. If it is alkaline, change to acid. Do not hope to conquer the colon bacillus with 5-grain doses. Give 15-grain doses three or four times daily for several days; then rest. Then repeat the attack. Alternate nonmedication with mammoth dosage of the drug, and the colon bacillus may be kind enough to run up the white flag.

Vaccines are usually advised. Better use them later. They appear to do but little at first, but may cinch the victory.

"Or you might inject silver solutions directly into the renal pelvis," butts in the abdominal technician. "It stands to reason——"

Hold, brother! Your chance will come a bit later. We have found that these injections are actually dangerous and quite uncalled for.

Renal Tuberculosis

I need not enter deeply into this much-discussed disease of tuberculosis of the kidney, nor do I need repeat that primary vesicle tuberculosis is rare, the infection here being but part of the picture higher up. Medical treatment is inefficient, and is unwarranted unless it is likely that the disease is bilateral. The surgeon must help us out here—*always;* give him but the diagnosis. Remember what has been said concerning the early high acidity, the mononuclear cells and apparent sterility of the urine, along with the clinical history, the physical examination (especially of the lungs), and the possibility of finding the tubercle bacillus either by smears or animal inoculations.

Other Infections

In gonorrhea, a urethral discharge is the rule and urines rarely are examined for the gonococcus. However, such an examination may be necessary in some cases. This series cannot well go into the treatment of gonorrhea, for the gonococcus must be almost as extraneous to the urine as is the smegma bacillus. The following, from the thousand and one lines of treatment, are best known.

In the very earliest hours, strong astringent injections, in the hope of aborting the disease; put the patient to bed, if possible, during the acute and severe symptoms; irrigations with permanganate, boric acid, and so on; injections of galactenzyme suspension; in selected cases, administer copaiba-oil or santal-oil by mouth; in the late cases, use vaccines, and other promising biologic agents.

Now and then (very rarely) a urethral infection or irritation is seen which cannot possibly be a true gonorrhea. Proper examination will show diplococci, which are elongated rather than biscuit-shaped, never arranged in tetrads, rarely found in the cytoplasm of the pus-cells, and invariably resistent to Gram's decolorization. They doubtless are exalted forms of the diplococcus urethræ communis. A few days on arbutin, 1 grain every two hours, will effect a cure. No complications appear to follow these nonspecific urethral infections. It is well to repeat that such infections are very rarely met with, the majority being truly gonorrheal.

In certain instances, the staphylococcus appears to play the chief role in kidney, bladder, and urethral infections. It is especially likely to act the part of secondary invader in protracted gonorrheas. This point must be kept in mind when administering vaccines.

In many organic diseases of the bladder, there may be retention of urine, with the result that saprophytic bacteria gain a foothold and lead to fermentation. The chief object is, of course, to remove the primary cause of the retention; for, as soon as the urine is quickly passed from kidney to the urinal with but little delay in the bladder, these bacteria cannot maintain a foothold. While this is being accomplished, the physi-

cian need not wait; but, recalling that all bacteria, and especially saprophytes, often are conquered by means of hexamethylenamine, he should proceed to render the urine acid, and exhibit this drug in large dosage.

Conclusions

This concludes our little series upon the therapeutic indications suggested by the uranalysis. Do not forget the uranalysis when diagnosticating: do not forget the uranalysis when treating. These are the main truths I have sought to impress.

Other subjects I have touched. Not in apology, but, rather, in explanation, I must state that the surgeon has come in for some jabs only so that certain laboratory truths might be impressed. (Far be it from me to stir up a ruction with one so skilled in the use of the knife.) I keep in mind the caution that, though lawyers knife the layman and minister to each other, physicians minister to the layman and knife each other. We all carry around a few wounds healing by second intention; but they will heal eventually, and we be the stronger by the scars.

The Doctor's Vacation

A Symposium by Readers of Clinical Medicine

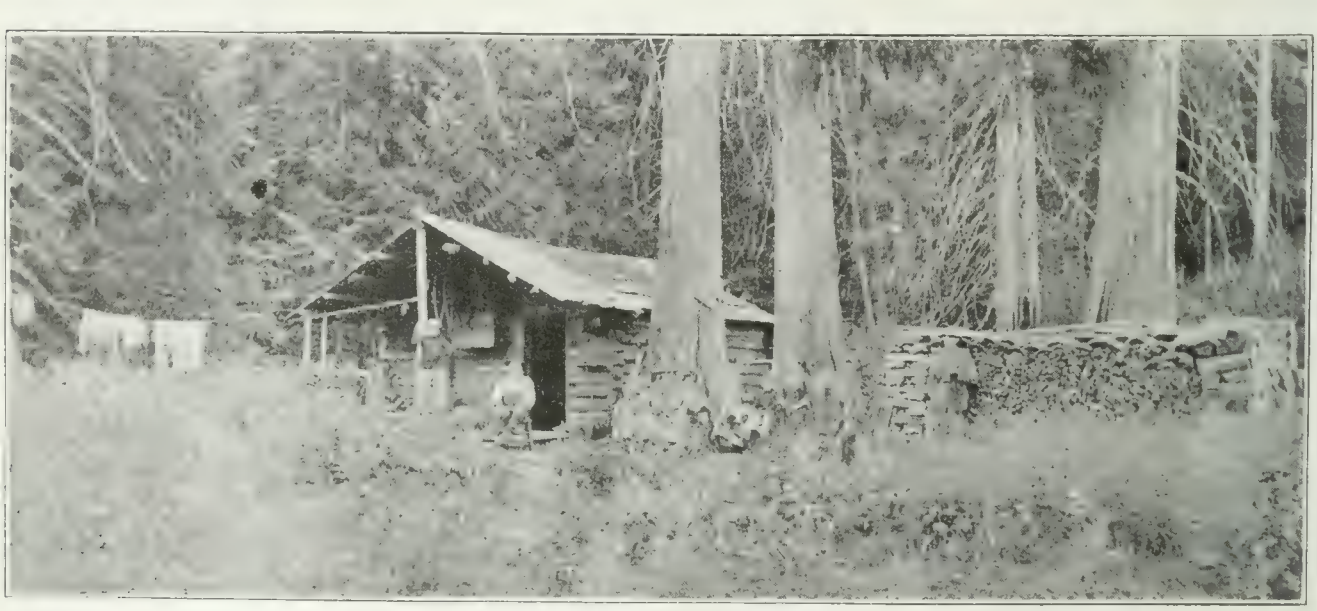
EDITORIAL NOTE.—Every year we receive repeated calls for help from physicians who are planning to take at last the long-hoped-for but long-deferred vacation. One particularly strenuous plea of this kind reached us a few weeks ago; and, accordingly, since we always try to give the "family" what they want when we can, we determined to "round up" a goodly bunch of our regular vacation going (or living!) army, and compel them to stand up and tell their little stories. You'll like them, of course—if you do not, then you are hard to please. But—are YOU going to take a vacation? If you do—and I hope you may—we shall expect a report from you next year. Now for the stories!

AN IDAHO OUTING

By Charles Stuart Moody, M. D., Hope, Idaho

DOCTOR, let's sit down here alone and, over a good cigar, lay some plans for your summer's outing. I assume that you intend to get away from the harness for a time this summer and "soak your soul over hub and spoke," in the joys of God's out-of-doors. I realize that one of the most difficult things confronting the doctor, after he has persuaded himself that suffering humanity actually can get along for a month without him, is the problem of where to spend the vacation he has so richly earned. What confronts him is, that every railroad has its favorite resort, and every railroad stands ready to rain seductive literature, setting forth the advantages of that resort, upon the devoted head of the unsuspecting mortal who is rash enough to make inquiry. Two things the good God does not seem able to stop, once they get started, are, one, the deluge of railroad-folders, and, two, automobile catalogs.

Now, know ye, right off the bat, that I am opposed to all resorts and to all highly advertised show-places reached by some particular railway or steamship line. These spots generally, when you arrive, degenerate into a palatial hotel, a hot spring about the size of a teakettle, or a "lake" but little larger than



How would you like to camp here?

Wendle and his "bunch"

a bath-tub, said magnificent lake filled with striped perch, a half score of trained black bass, a few mudcats, and circumnavigated by innumerable mosquitoes. For all of which the poor, hard-working medic must surrender coin of the realm, until his bank-account suffers from life-threatening inanition.

I am equally ferninst the famous railroad show places, such as the Yellowstone National Park, the Glacier Park, or all other localities where nature seems to have run riot. The innocent and unsuspecting disciple is sold a railway ticket that includes a trip through one of these show places and is suavely assured by the gentlemanly agent that this strip of paper entitles him to all the rights, privileges, and immunities of an American citizen, including the right to fish the streams, scale the glaciers, watch the spouting of the geysers, feed the grizzly-bears, and do all manner of stunts set forth in the highly illuminated advertising.

To be sure, a little prudential attention to the details of said ten-foot time-card would reveal the fact that there hardly is breathing-time allowed for him to catch any great number of trout or feed any multitude of hungry bears; for, the plain fact is, the tourist is rushed through as rapidly as horses can travel, in order that the transportation company may get back to headquarters and seize another load of victims. One catches only glimpses here and there of the wonderland he has come so far to see. The beauties are there, and the man who takes the time will find them; but not a one will discover them from the top of a stage-coach or the hurricane-deck of a cayuse. Yes, indeed, it takes months to explore either Glacier Park, the Yellowstone, the Yosemite (alas, the poor old Yosemite has fallen under the greed of man) or the Grand Canyon.

Take my advice and do not attempt any of

Breaking camp at Kilroy Bay

Our woodland goddess

the "personally conducted" through any of the great show places of the West; also absorb another large chunk of advice, and steer several points clear of the palatial summer hotel, with its "finest fishing, bathing, boating." Either of these diversions is a delusion and a snare so far as the health hunting, recreation-seeking doctor is concerned.

"Where, then, would *you* have us go?" methinks I hear some curious reader ask.

The answer is simple and ready. Come right out here into northern Idaho, fetch along a good appetite, a tent, blankets, a fishing-rod or two. Get off at Hope, climb exactly 83 stair-steps leading up from the depot to the street, open my office-door, look in and say "Howdy," then leave the rest to me—I'll be there, ready to tell you where to go and how to have the one bangup good time in all your toil-worn existence. If you have a suspicion that I can't make good, just sit down and drop a line to Dr. Floyd G. Wendle, Danville, Illinois, or mayhap to the editor of this journal, and ask either of them about it. (By the way, this applies only to doctors, dentists, pharmacists, and their sisters and their cousins and their aunts.)

All this information is without money and without price. I'm doing my part of it for the fun I get out of it, and for the further reason that there is not a bit of selfishness in my physical makeup and I am more than willing for my brethren to enjoy all the things I enjoy, and from the still other excellent reason that "when fishing interferes with my business I quit the business." I am ready to help you have a good time. Moreover, if any merchant, dealer, tradesman, artificer, mechanic or any person, firm or corporation overcharges you or yours for any goods, chattels, provisions, supplies, material or labor, give me the name or names of said person, firm or corporation, and I shall see to it that such is, or are, shot at sunrise, without the "chanst" to say their prayers. All of which is to intimate that our people, instead

One of our trout streams

Just cold tea—that's all

of preying upon the stranger within our gates, heartily welcome him; and that you can buy your grub and camp supplies just as cheaply as can I, myself.

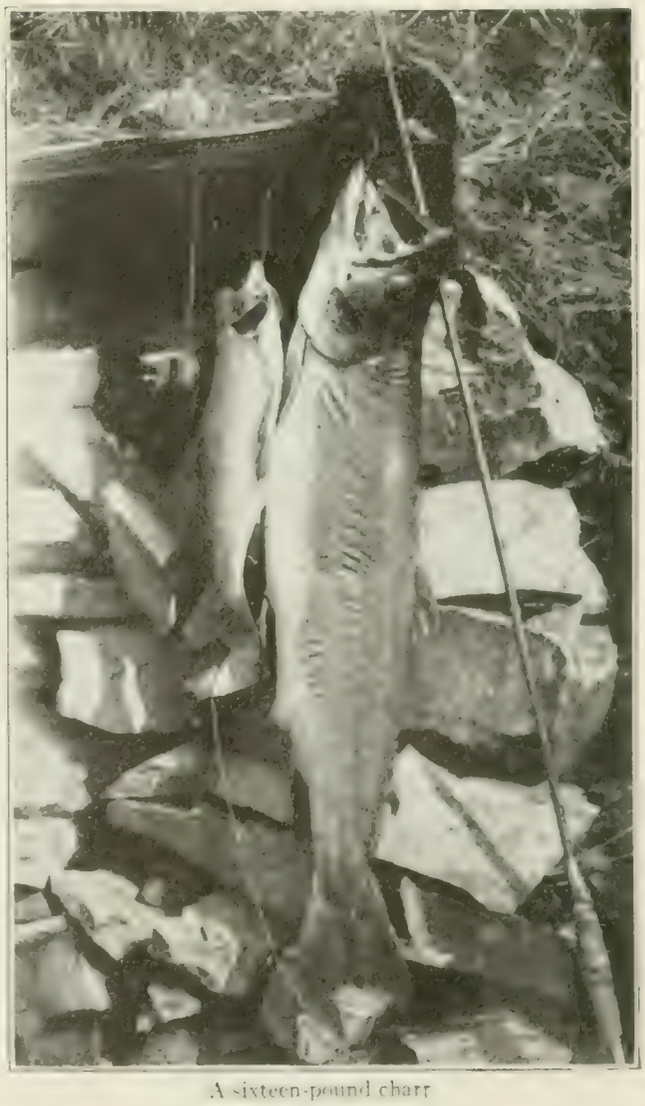
So much for that. Now it becomes necessary for me to make my "bluff" stick. Hope is located above Lake Pend Oreille, and Lake Pend Oreille is—bar none—the greatest body of fresh water on earth. When I mention Pend Oreille and you look it up in your cyclopedia, pray, do not look for a frog-pond, but for a vast inland sea, dotted with emerald isles, fed by clear mountain streams. Its waters are thronged with trout, its shores indented with beautiful land-locked bays, where evergreens come right down to the water's edge and grassy meads afford the loveliest camping-sites for all who care to come—without let or hindrance or charges.

During the summer season the water is fine and bathing in the sandy shallows one of the delights of the wife and kiddies, and of which the illustrations convey but a faint conception. The boating at all times is good, and nothing in life is finer than to float in the shadow of the granite-ribbed old hills and watch the trout play.

Of course, it is the fishing you are interested in—being an angler, like myself, why should you not be? It is almost impossible to tell about the trout fishing in Lake Pend Oreille without one's degenerating into guidebook literature; from which heaven deliver me.

The only way for me and the best for you is for me to tell you the simple, unvarnished truth, then offer to bet you I can prove it when you arrive here. Glance at illustration and you will see a representation of a fair specimen of our charr-trout. This little chap weighed exactly 16 pounds when taken from the water, and he was hooked on a No. 2 Wilson spoon not half a mile from Hope dock and fought for over an hour for his freedom. I cheerfully promise to duplicate the performance for you any day in season, if you care for that kind of excitement. The little fellow hanging beside him is a 2-pound cut-throat-trout, of which you may load a boatful any day should you see fit to do so. I should advise you, however, to limit your daily catch to 20 pounds, for there is a keen-eyed warden here who keeps watch and ward over the finny citizens of the bluey deep, and is their particular friend. Nonresident fishing-license costs only $2.00, and may be obtained at all drugstores and from justices of the peace.

All the fish, though, are not in the lake alone. The streams round-about abound (I believe that is the accepted term) in just as pugnacious fish as you care to encounter. If you have spent your angling-life hitherto in fishing with what we call a "plunk"-pole



A sixteen-pound charr

and a worm for bait, better come on out here and let me initiate you into the sublime mysteries of the fly-fisher's degree. Fly-fishing for stream-trout is sport, recreation, art, and not a little labor, all combined.

Just roll out of your warm bunk early in the morning, while the mists are yet heavy on the water, swallow two cups of hot coffee, several rashers of fried bacon, two eggs, and half a loaf of bread, then gird up your loins and follow me over "bog and fen and foul morass," up to where a clear cold stream comes tumbling right down from out the glaciers, unlimber your fly-rod, tie on a royal coacham and a black gnat, slip off a rock into the ice-cold water hip deep—and then watch the fun.

The joy of fly-fishing is not so much in the trout you catch as in watching the play of expression on the face of dear old Mother Nature, listening to the wood's sounds, to the sighing and soughing of the wind surging through pine-tree tops, the ripple of the waters over the boulders, the liquid-clear song of the water ousel—yea, it is all of these that combine to render a trip into the fastnesses of Idaho's mountains a memory to be treasured through all the years that may come, a recollection to return to when the storms of winter howl about the office and a snug fire in the hearth invites remembrances.

Bathing Baby—Lake Pend Oreille

The good editor has requested me to specify what the intending visitor ought to take along for such a visit here. Truth to tell, you should fetch but very little. Of tackle, perhaps your favorite rod and creel. Tackle can best be obtained, no matter where you are going, at the place where you intend taking your departure from the railroad. The reason for this is not far to seek: dealers generally manage to keep the peculiar kind of tackle affected by the fish in their respective locality. So it is here, the fishing-gear in use in the East or the Middle West would be useless here in Idaho. The same is true of camping-outfit. Do not load yourself down with impedimenta that can be procured just as cheaply at your destination. A good wall-tent and such additional tentage as you may require may be brought along, checked as baggage.

Bring bedding, of course, in such quantities as will keep your party comfortable, remembering that our western nights always are cool; and you will require at least two blankets per person. I cannot refrain, though, from mentioning one little article that has proven indispensable to me, and that is the Stopple "kook-kit," a handy arrangement for cooking when on side trips, which occupies but very little space and can be carried in the pocket. A good pack sack should also be supplied, although this may be procured locally, also.

As to clothing, every man has his own notions. I cannot buy your camping-clothes any more than I can wear them. Avoid the *outre* in garments and confine yourself to good, serviceable woolens and ducks. For fishing, nothing is quite so good as either khaki or duck. Do not wear woolens when fishing, unless you have a middling firm grip on your religion; for, of all things, woolens are the worst to ensnare hooks at the particular moment you do not wish them to be ensnared. Woolen undergarments and heavy woolen socks are necessary at all times for stream fishing, for then (if you follow me) you will be wet from morning till night.

The ladies will do well to provide themselves both with divided skirts and overalls. All our western ladies, when camping, wear ducking overalls, and do not feel their modesty shocked in the least. For footwear, heavy shoes with hob-nails are necessary for mountain work, while tennis-shoes are the thing for camp and for boating. The ladies will do well to bring along high-laced boots, for there

are brambles to be encountered on all the mountain trails.

Then, also, the good editor wants me to tell *where* to come to. Of course, I wish you all to come direct to Hope; for then I can take care of you in a manner befitting your station and desires. However, this lake is a great, big sheet of water and there are hundreds of miles of shore line, reached by four railway lines and two lines of steamers, any of which will carry you and your duffel to a desirable camping-place and help you to get located. I don't much care where you come on the lake, just so you come, and after you get here send me word that you *are* here. Then some fine day you will see me showing up in the offing with the Papoose under full power, paying you a visit.

A PROFITABLE DOCTOR'S VACATION

By William Rittenhouse, M. D., Chicago, Ill

FIRST of all, much depends upon individual taste and temperament. The time was when a fishing or hunting trip would have seemed to me the ideal vacation. But I have lost my taste for killing things; now I can get far more pleasure out of the wild creatures by studying their habits and ways of life than I ever got from killing them.

No one ever had the "blood-lust" stronger than did I in my youthful days. No prospect of a holiday filled me with such excitement as the one when I could take a gun into the woods and slay any wild thing that might cross my path. And, yet, even then I felt a twinge of remorse at the pathetic look of reproach in the glazing eyes of some creature whose little span of life I had cut short for "sport."

Perhaps I can best indicate my conception of an ideal vacation by mentioning some of those I enjoyed most and the ones that I am planning for the future. This year I had intended a horseback trip in the Sierra Nevada Mountains of California. The plan was, to enter the mountains at Yosemite, explore the valley and the National Park around it, and then, with guide, pack-animals, camping-outfit, and one, two or three congenial companions, make my way by the trails of the high Sierras south to the Kern River country; little more than a hundred miles as the crow flies, but by the winding mountain-trails far enough to furnish from two or three weeks of glorious mountain travel.

In planning such a trip, it pays well to make a preparatory study of the region—its geology, its animal, bird- and plant-life. For more than a year I have been making such a study, by reading John Muir, Smeaton Chase, John Burroghs, Mrs. Parsons, Stewart Edward White, and others; and I know that, when I make the trip, this reading will increase my pleasure at least five hundred percent. That most people, in traveling, miss more interesting things than they see, because they

More good trout water

do not know what to look for, is a truism needing no repetition.

An attack of neuritis having put a horseback trip this year out of the question, I have postponed the undertaking outlined, and have substituted for it an automobile trip from Niagara Falls to Philadelphia, tracing through the Alleghany Mountains the route followed by my father and mother a hundred years ago, when, as pioneers, they emigrated from eastern Pennsylvania to Canada. Thus I try to make each vacation serve a definite purpose.

Several years ago I made a trip through Wisconsin, Minnesota, and Manitoba, for the purpose of studying the glacial geology of that region; my special objective being, to trace the old river-bed by which Lake Superior drained over into the Mississippi during the latter part of the Ice Age.

Even the kiddies catch fish

Really, I know of no study that can add so much pleasure to vacation trips as glacial geology. Besides, it is the easiest of all the natural sciences—a veritable lazy man's study. A very little reading will give one an idea of what to look for, and then every railway journey, every walk in the country, will reveal interesting things that one was wont to overlook before. The traces of the great Ice Age are all round us, if only we have eyes to see.

In my estimation, the average crowded summer resort is a poor place to take a vacation. Possibly it is better than nothing, but it seems to me like eating dry husks when wholesome, enjoyable food is within reach.

I have spent a number of vacations on Mackinac Island; not, however, because there are crowds there, but in spite of that fact. I love that island because it is rich in history and Indian legend, because of its natural beauty and its wealth of plant- and bird-life, its grand forests and its curious rocks and the everchanging fresh-water ocean around it.

To sum up:

1. The ideal vacation should afford outdoor life and communion with nature. The greater the number of the natural sciences one is familiar with, the richer the feast one will enjoy.

2. One should be neither too lonely nor in a crowd. One or two congenial companions are enough; more are liable to become irksome. One time a friend of mine was in the mountains of the California coast five months with no companion but his faithful horse, and he talked to it as he would to a human companion; and he claimed that the horse understood him. I, myself, greatly enjoy and understand my fourfooted friends; nevertheless, I do want a little human companionship besides.

3. Severe physical exercise is not desirable for persons accustomed to sedentary habits. Bicycle trips were excellent in their day, but the automobile, or, rather, the reckless chauffeur, has made the roads unsafe to the wheelman.

4. Walking is fine, if begun in moderation, giving the feet and muscles a chance to become hardened. Here, also, a good companion is desirable.

5. I cut out all reading when on a vacation, especially novels. I want my eyes and brain to have a perfect rest.

WHY NOT COLORADO?

By L. E. Likes, M. D., Lamar, Colorado

NO DOUBT there are many problems that face members of the profession, that come up daily to be solved and require considerable attention, but I am free to confess that among our various perplexities the one to give me the greatest concern was in deciding upon a vacation that would be profit-

A Colorado mountain scene

able and at the same time economical. As to the latter, I do not mean to draw the line too closely, but just for the average practitioner who, let us say, takes in about $2000 per year.

When in college, struggling along for the pigskin that was to land me at a long-desired goal, I had pictured to myself the same castles in the air that others have done, those periods of brief respite from the maddening toil that should temper the hardships of life's struggles. However, after entering practice, I was quick to learn that those dreams, at least in the earlier days, were not to come true.

In bucking the line good and hard, I quickly found my weak places, and made up my mind that the vacation-idea was to be held in abeyance until I had taken that needful post-graduate (same old story) work in a certain celebrated hospital. This, accordingly, I did. Notwithstanding that I put in longer and more vigorous hours while away on this mission, my patients and friends on my return home complimented me on my appearance and would have it no other way than that I had been enjoying a great vacation; and they apparently envied me, since they, themselves, were unable to get away from the stress of business. Right then and there I made a solemn vow that I, too, at a not distant date would go in for the real kind of a vacation.

My first intentions were good, especially so upon my return home; but I soon drifted into the old channel, from which it is so hard to rescue oneself. I let the idea drag along a little, until at last I found it absolutely imperative that I seek at least a brief change. And now to my experience.

Charles Owens, an old pal of mine when doing "prep" work at the University, for a number of years had been writing me to come and spend a few weeks or months on his ranch on the Gunnison River, on the western slope of the Rocky Mountains. Consequently I now decided to accept this standing invitation, as my practice was in such a shape that I could conveniently leave it for a while.

I arrived at the Owens ranch the middle of August. Charley met me at the train at Gunnison, and we drove for a distance of about ten miles out to his ranch. It was a

The mountain ranch

Bruin on his good behavior

bright moonlight evening, and the exhilarating mountain-air proved wonderfully bracing.

It had been my fortune, during the short span of years I had traveled, to enjoy the best of accommodations, but I am free to confess I had never experienced such a night of deep, dreamless sleep. Just think of it—blankets in the middle of August! But the soothing breezes which swept down from the snow-clad peaks through the tall green pines and into my open cabin window required just such bed-equipment.

I was lost in fathomless space, when Charley came to my door and announced that breakfast was awaiting my pleasure. I quickly hustled into my khakis and big outing-boots, and after a short but thorough toilet appeared in the combination kitchen and dining-room.

My, what a feast there was awaiting me! Crisp mountain-trout, that Charley had pulled from the pool but an hour before just below the ranch cabin, greeted my eyes, while the board was laden with many other delicacies of the Hills, which only those know who have partaken of them.

After breakfast I suggested to Charley that we walk over to the foothills of one of the clusters of peaks which attracted my curiosity. Mrs. Owens was for fixing us up a lunch; but I protested, declaring that after a short stay we should return in time for the noon-hour meal. So, we started on our journey; but when noon came it seemed that we were no nearer the hills than the beginning. Imagine my surprise when Charley informed me that the peaks I was heading for were only seventy-five miles away.

The next morning we were up at sunrise, ready with our rods and flies to battle with the rainbow and the speckled trout for which the Gunnison is famous. I confess, it took considerable coaching before I had mastered the game sufficiently to make at least a fair trout-fisherman; still, our combined catch at that was not bad.

The following afternoon we went dove hunting, which certainly was some sport. During the short period spent away from the cabin we bagged the limit allowed by the law; and the dinner the birds made that night is beyond description.

I must mention here that the outing in the mountains was made complete with the assistance of Miss Alice Graves, sister of Mrs. Owens, whom I found very adept in aiding to win the rubber at whist, played in the big living-room by the light of the fire-place in which crackled rich resined pine-logs. And such a varied program was carried out for nearly a month. Alas, there came the time for parting, although I was loth to think of it. But, then, the mandates of prosaic existence brook not interference.

I am back home again, stronger in body and mind, and feeling better than at any other

We catch a "few"

time in my life. The expenses of the trip were practically nominal.

Give me the mountains for a tonic, I am going back again, you can depend on that. Those hills, that air, and Miss——!

TRY NORTH CAROLINA'S "LAND OF THE SKY"

By C. W. Hunt, M. D., Brevard, North Carolina

ONCE upon a time, in the days of long ago, old Father Æsculapius, worn and weary in ministering to the ills of mankind, knowing, as all good physicians know, that his case was beyond the reach of the healing herb or the art of man, prayed to his divinity, the Goddess Hygieia, to be shown the most restful, beautiful, and healthful spot on earth. While he prayed, wornout nature claimed her dues, and from sheer weakness he fell asleep; and as he slept he dreamed of a beautiful land where nature, that sweet restorer, lavished all of the beauties of rugged mountains and peaceful vales.

By and by he awoke to the song of many birds, above which thrilled the flute-like call of the Bob-White, and his enchanted eyes beheld the beautiful valley of the French Broad, pierced by the sparkling river and surrounded by the towering peaks of the Appalachian and Blue Ridge Mountains in all of their grandeur and sublimity. And, behold, in his dream "the half had not been told."

Entranced by the varying and shifting scenes on the dizzy mountain tops, the mystic shades of the mountain gorges, all veiled in the azure haze that glorifies the Smoky Mountains, his thirst allayed by the pure, sparkling waters from the purling springs, his brow fanned by the cool ozone laden zephyrs from the "forest primeval," his body became exhilarated, his soul rejoiced, and he lifted up his voice and cried out, "Verily, this is God's country."

As a true physician, having ever in mind the weak and the afflicted, he forthwith sat down and wrote this prescription:

"If thou art worn and hard beset
With sorrows that thou wouldst forget,
If thou wouldst read a lesson that will keep
Thy heart from fainting and thy soul from sleep,
Go to the woods and hills. No tears
Dim the sweet look that Nature wears.

"Send the people to the mountain,
To the lake and to the mountains;
To the hills and rills and woodlands;
That the sick may breathe the balsam,
That the weary may be rested,
That the children may be healthful,
And the joy be universal.
Bring them from the heat of summer."

For myself, and in the name of the hospitable citizens of Brevard, North Carolina, I extend a cordial invitation to my professional brethren from the north, the south, the east, and the west to visit this our favored land. Let them command me in every way in which I can serve them—though I beg not to have my pulse, temperature or respiration taken, nor be forced to put out my tongue. Forget it all, doctor, and just rest—yes, and you *can* rest. Truth, had good old Rip Van Winkle, of Catskill fame, gone to sleep in these mountain abodes, he would be sleeping still.

A view of distant peaks

Warning: If any of the Knights of the Powder and Scalpel have a stomach like unto that of Timothy, they must bring their own pizen and snake-bite medicine. This is a "dry" section; however, the climate is so healthful that there is no contraindication to the use of anything the stomach may call for.

In a climate preeminently healthful and bracing, we find Brevard the Beautiful, at an altitude of 2250 feet, centrally located to all of the scenic points of interest in western North Carolina. It is situated between Asheville and the picturesque Toxaway Lakes in the Beautiful Sapphire Country, the

A placid mountain stream

Land of the Sky, the Switzerland of America; in the land of fertile fields and sylvan vales, and of towering mountain-peaks; the land of rivers, rushing torrents, and mountain-lakes; the land of birds and flowers; the land of waterfalls; the fairy land of rest, health, and beauty; "the land where the weak grow strong and the strong grow great."

The tourist can enjoy roaming through the forests of majestic oaks, poplar, hickory, hemlock, trees of many species, and the sheltering azalias and kalmias that grow in profusion, with innumerable other varieties of wild flowers, and "the trees, the sylvan gods, the lovely company of haunted solitudes."

If so inclined, he can, with rod in hand, explore the foaming trout-streams, scaling cliffs and boulders at the risk of neck and limb; or walk or drive along the beautiful French Broad River and its valley, far famed for its beauty; or explore the gorges of the Smoky and Balsam mountains, and lose himself in their depths; or by bridlepaths ride to the tops of numerous mountain-peaks and look down four thousand or five thousand feet and feast his eye on scenery the most beautiful and most varied in America.

In summer, fishing is to be had around Brevard, and both fishing and rowing at the Toxaway Lakes. After the 15th of November, the sons of Nimrod can explore the valley for the Bob-White; the woodland for the gray squirrel and the woodcock, and penetrate the mountain-fastnesses for the pheasant and the wild turkey, bear, deer, and the red and the gray fox. To be sure, we have an abundance of Molly Cotton-tail and the "Possum Raccoon."

I would urge my visiting brother to eat, drink, and sleep. Hotel accommodations range from $1.50 to $3.00 per day; boarding-houses, from $7.00 to $10.00 per week; in the country, $6.00 to $7.00 per week. When possible, it is advisable to engage rooms in advance. Everywhere good, old country fare—chickens, fresh eggs, pure milk and butter, home-grown vegetables, and home-cured hams are to be had.

A lumber team, Brevard, North Carolina

A VACATION IN THE CUMBERLANDS

By M. G. Price, M. D.,
Mosheim, Tenn.

IT IS not far fetched to say that after a hard winter's work these frail bodies of ours are like an old elastic suspender, the stretch all taken out of it.

When summer comes we need something to restore our resilience. What shall it be? The high tension of professional life is responsible for much of the "wear and tear." The summer heat comes in for its share of responsibility, and there are many other causes. At the height of the heated season we are likely to find ourselves with all the stretch taken out. What shall we do to "come back"? That will bother many of us.

Lake Toxaway, North Carolina

Rest is the cure for many of these ills, and rest is due us all. It may be long in coming but by economy and virtuous living we may lay by in store so that by and by we shall be able to quit this ceaseless struggle and calmly and restfully await the change that is coming to all.

There is rest for all things. On still nights
There is a folding of a million wings—
The swarming of honey-bees in unknown woods,
The speckled butterflies and downy broods.
In dizzy polar heights:
Rest for innumerable nameless things,
Rest for the creatures underneath the sea,
And in the earth and in the starry air.

But where shall we escape that we may recuperate from this exhaustion? I can answer that. Come to the mountain country of eastern Tennessee and you will solve the problem. Bless you, you can sleep under a blanket any night in July and August, and in comfort. So far as something to eat is concerned we always have it. The people are friendly and social, in contrast to many of the people from the north. You can go to the cities, if that suits your fancy. There are Knoxville, Johnson City, and others that are almost in the country and yet are in the mountains.

Also, we have private resorts high up on the mountain sides that will give you an unlimited vision of this great valley of easternTennessee, cut out by the action of the glaciers in that far off period of time (if you are fond of geology). And there's LaFollette, too, the queen of the Cumberlands nestling close in a great pass torn through the mountain sides by the action of the waters of an ancient lake now reduced to what is known as Indian River.

Look at some of the pictures I am sending you, and be convinced that there's no better place for real restfulness than this dear homeland of ours. Try camping out in the mountains, fish, if you like, in our mountain streams, get a good saddle-horse and make a jaunt into the depths of the Cumberlands or take an auto trip into the edge of things. Bring along the wife and children and live out of doors — come in rhododendron time. Don't be afraid because it's "down south." After all, we have the real restful summer resorts where you can enjoy every moment of your vacation. Why not Eastern Tennessee, *this* summer? Make your mind, Doctor and come this year.

An old saw-mill near Brevard

WHY NOT GO FISHING?

By Geo. H. Candler, M. D., Chicago, Ill.

JUST as the grass glinted the most delicate green under the warm rays of the late May sun and the breeze ruffled the emerald velvet of the lawn; when, despite every endeavor, one's fancy would stray and visions of tree-fringed blue lakes, odorous trails, white tents and red-gold fragrant camp-fires obscured even the most interesting clinical picture, the heartless editor dropped in and explained that he proposed to present a "Summer Vacation symposium" and counted upon me for a contribution under the caption "Why Not Go Fishing?"

Mountain scene near Greenville, Tennessee

Why not, indeed? The very thing I had been asking myself all day! Why not go fishing *now* when in a hundred brooks released from their icy fetters the water is swirling and singing around the rocks and logs; when in each eddy and pool the trout are lying ready to take the first fly presented; when the bass are seeking the shallows and strike fiercely at the lure skilfully cast into the reed pockets or under the deadhead! Why *not* go fishing today, when the odors of the awakened earth arise on every hand as incense to the Throne and the robins and song sparrows make liquid music in the dogwood bushes!

Why not go fishing—today? Because, to go to the right place—to wet one's line in worth-while waters would mean a journey of three hundred miles and necessitate absence from Duty (with a capital "D") for several days. And the man who shirked *duty* could never truly appreciate the song of the reel or comprehend the message of wind-tossed waters. To be in thorough touch with the spirit of stream and wood one's conscience must be clear and one's soul receptive. When one's hand has done as well as maybe that which it has found to do, when every call to the front has been answered and sustained effort brings weariness of mind and body, *then*, with a period of rest and perfect happiness well earned, Why not go fishing?

You couldn't do anything better if you tried provided of course that you go fishing under proper conditions and to the right place. Merely to go somewhere and catch a mess of fish somehow is *not* "going fishing."

If you live within reach of Northern Wisconsin—or Minnesota—you can enjoy perhaps the finest mixed fishing to be found anywhere. The large-mouth bass and perch-pike ("wall-eye") are almost omnipresent in the lakes of this region and in the deeper waters—especially with rocky or gravelly bottom—the king of them all, the small-mouth black bass, strikes freely from June to the end of September.

In some waters he may be taken with the fly. The best time so to capture him is in the evening, just before or just as the sun is setting. Try it in June and the early days of July. During most of the extremely hot weather (always then during the middle of the

A trail among the rhododendrons

Back into the wilds by rowboat and canoe

day) the "small mouth" seeks the depths and must be fished for with skill. For the benefit of my professional brethren I will reveal a method which has proven "a sure killer" in my own hands and which I have seen but one other man use.

Here it is: About nine inches from the end of a thin, neutral-tinted casting line, attach a six-foot "mist"-colored gut leader. To the free end of the *line* fasten a dipsey sinker. When the sinker is dropped, this will cause the leader to float about nine inches from the bottom. To the end of leader, and again two feet higher, loop on a single gut "sneck" bass hook. Bait with live minnows, hooked lightly through the nostril. The minnows swim around freely on the light and almost invisible leader and Mr. Bass strikes them hard—and often. The largest fish I have taken were caught on this rigging. Moreover, I have sat in my canoe and taken fifteen or twenty bass within an hour therewith while good fellows in three other canoes, each with two rods rigged ordinarily, and located within fifty feet of me, failed to net a single fin.

In the middle of the day during the hot months the big-mouth may be taken from the edge of bars and deep holes in precisely the same manner. At this time to cast into the reed pockets and about fallen timber and deadheads is almost useless. However, during June and again in September, as the water chills, casting to shore is *the* thing, and personally I would sooner take two bass on long casts out of a tree-top than ten by deep fishing.

Without any question the best bait under such circumstances is the small, live frog. Next in killing efficacy comes the lively *mud-minnow*, and, failing these, a properly cut pork-rind. After ten years' experience I have about decided that in most of the Wisconsin lakes the artificial minnow is more or less "N. G." Sometimes, when the bass are taking pretty nearly anything, the "gun-boats" will fetch a strike, but ordinarily one may thresh the waters for hours without response. I do not mean by this that one style of minnow will fail and another succeed. In the waters I have fished—and which I fish each year—few artificial lures are used and these are cast by beginners or old hands "trying out a new one" or confirming once more their belief that the "wood-blocks" don't catch fish.

On dark days and when trolling along the edge of the lake a small spoon and bucktail will work nicely but you are just as likely to pick up pickerel as bass. Most of us eschew these fellows, though in the Gogebec and adjacent waters the pickerel are extremely savage fighters and make an acceptable chowder later.

Doctor Candler and his 38-pound muskie

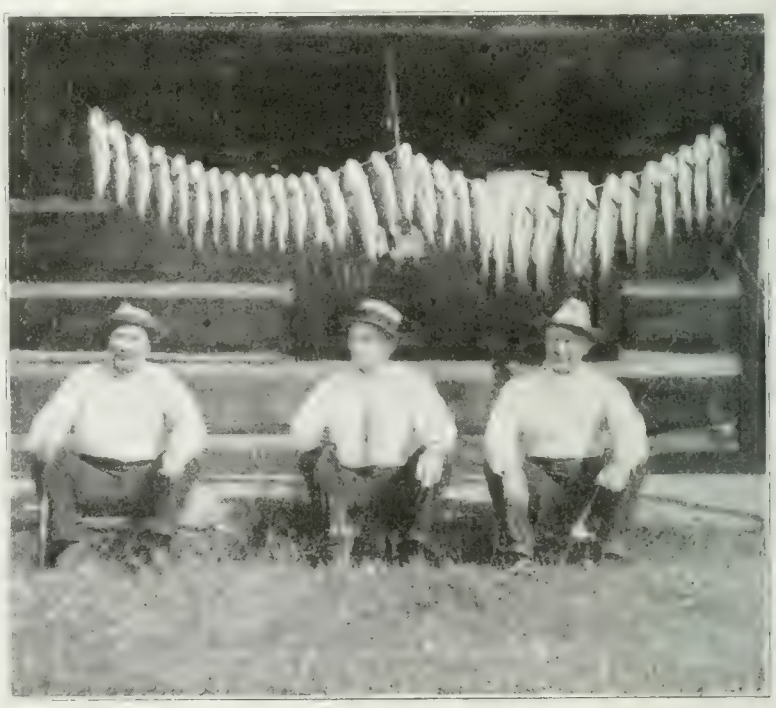
The great northern pike is not particularly plentiful in the Wisconsin waters but some fine specimens are taken each year. In the less-fished water muskies are still abundant and few lakes on the right side of the divide fail to yield one or two to the man who really fishes for them. Fishing for muskies, however, means hard work both for fisherman and guide. In the first place the rougher the water and the heavier the wind the better the fishing. If you troll, the boat must be kept going at a fair rate round and round the lake or selected bars. Hours will often pass and not a strike be secured. Then, just as vigilance relaxes and the grasp on the rod loosens, a thirty-pounder hits the spoon and the fight is on—to end, alas, only too often! just as suddenly as it began.

In some unaccountable manner the fish will manage to get the slack, or a line "guaranteed to hold any muskellunge" will snap like a thread when his majesty leaps into the air or bores for the bottom. If you do fish for muskies use a new line each day and have a twelve-inch piano-wire leader next your spoon.

If, however, you want real fishing stick to the bass, pike and trout. To find them is comparatively easy and the equipment is not expensive. At least it need not be, though, as the habit grows, the tackle box gets larger and the rods accumulate.

To begin the game all you require is a split-bamboo five-foot casting-rod (you can't well beat the Heddon, made at Dowagiac), a quadruple multiplying reel—you can spend from $4.00 to $50.00 on this as you feel disposed—a couple of good undressed silk casting-lines, and a few spinners, small spoon-hooks, bucktail and a dozen snelled bass and trout hooks with a supply of swivel sinkers, split shot, and other minor accessories. I would buy a Tri-part or Take-apart reel or (if there is money to spare) a Blue-grass Simplex. The beautiful Meeks, Talbots, and the like can come into your possession later. The Skinner spoon—single and with auxiliary hook—is standard, and the Hildebrandt baits—especially the Slim Eli with bucktail—are sure killers. Every sporting goods dealer has his favorite lines. The better grade, the Kingfisher, cannot, however, easily be beaten. Get a good collapsible net and a stringer. If you are going to camp, a minnow bucket is an essential. If you are at a resort they are supplied. For trout you will, of course, need small hooks and spinners or if you want to fly-fish you should have a fly-rod and a good supply of tied flies. Most of the streams, however, are small and so brush-covered as to make fly-fishing difficult.

Now—where to go? Get your ticket on the North-Western to Eagle River, Three Lakes, Conover, Watersmeet, Cisco, Gogebec, and you're sure of good fishing. At Eagle, Everett and half a dozen others will take care of you. At Cisco you'll find Charley Bent, or Lundberg of Tenderfoot Island. You can't miss it there. Indeed at either place you have the choice of a score of lakes and canoe trips



A real Wisconsin catch

of infinite charm and variety. Every fish that can be caught in the Wisconsin waters may be secured from these two centers. The accommodations are good and charges reasonable. Guides are ready to show the new man the ropes. Board ranges from $12.00 to $15.00 per week; a boat or canoe will cost you fifty cents each day; and a guide, if you want one, $2.00 to $2.50 per day. The first season it would be well, perhaps, to stay at and fish from a resort; later, when you know the waters, and country, you can fit out at the resort and camp first on one lake then on another. For that matter, it is possible to leave a resort each morning, fish during the day and make another resort in time for supper. Some extremely pleasant four-, five- or even seven-day trips can be made this way.

Our camp among the white birches

Hardships need not be endured; but have just as much roughing it as you desire. Wear your old clothes and if you intend really to fish take along a ducksback suit and a slicker. Shoe-packs are the most satisfactory footwear. Get good ones and wear heavy woolen socks in them. Fly dope is essential in June. Remember that smokable tobacco must be carried along and it is not a bad idea to stow away in your kit a few emergency remedies.

I shall be glad to hear from any reader of CLINICAL MEDICINE who feels disposed to make a fishing trip and would like to be put "absolutely next" to the best thing going. I'm off for the identical spot tomorrow. Or, if you feel disposed, drop a line to Bob Thurston, Dam Lake, Eagle River, and see what he has to offer.

We stop for lunch

A TRIP TO SOUTH AMERICA

By S. Austin Davis, M. D., Brooklyn, N. Y.
Surgeon of the Steamship Vauban, Lamport and Holt Line

GET out your atlas or globe and turn to the map of the American continent. Now draw a line from New York southeasterly to Cape St. Roque, the most easterly point of South America, continue the line along the coast of Brazil, touching at Bahia, Rio de Janeiro and Santos, ending at Buenos Aires, capital of Argentine, and you have a base line on which to plan "a doctor's vacation."

This route is chosen since we have been over the course many times and know its attractions and advantages. Being away from the beaten track of the globe trotter from America, though well traveled by Europeans, it offers the fascination of countless novel sights and experiences. Properly to consider these last would require more

space than that between the covers of CLINICAL MEDICINE.

The doctor in need of rest of body and mind gets it on this voyage. He cannot well avoid it, on a voyage of twenty-three days, under the favorable conditions of weather and sea that usually prevail, surrounded as he will be with every comfort and luxury, even, that is to be had in well-equipped hotels. The fear of sea-sickness, the black beast which deters so many from undertaking a sea voyage, in our experience with this route, is more imagination than reality. From start to finish life is entirely spent on deck, and out of doors. For those of active disposition, there is provided a variety of deck sports, there is a well-found gymnasium, besides music and dancing, which latter are regular features every evening.

It may interest some to know that approaching the Equator is not synonymous with a great increase of temperature. The following tablet of observations will give a good idea of the prevailing conditions.

DAILY NOON RECORD FROM THREE DAYS NORTH OF EQUATOR TO THREE DAYS SOUTH

		Aver. Temp.
1911—Sept. 29	— Oct. 3	82°
Nov. 25	— Nov. 30	82°
1912—Jan. 1	— Jan. 5	82°
Feb. 22	— Feb. 27	79°
Mar. 30	— Apr. 6	83°
May 24	— May 29	87°
June 30	— July 4	80°
Aug. 21	— Aug. 25	84°
Sept. 28	— Oct. 2	82°
Nov. 21	— Nov. 26	83°
Dec. 24	— Dec. 29	82°
1913—Feb. 5	— Feb. 10	84°
Mar. 18	— Mar. 22	81°
Apr. 28	— May 2	85°
May 27	— May 31	85°
July 8	— July 12	86.5°
Sept. 29	— Oct. 4	81.5°
Nov. 9	— Nov. 13	82°

Lowest temperature recorded, 75° F.
Highest temperature recorded, 93° F.

It will be desirable to have a generous outfit of summer apparel on the voyage as well as sufficient preparation for winter cold, should the traveler contemplate proceeding around Cape Horn or across the Andes. And while deciding what to take along don't leave your camera where the Dutch skipper left his compass, that is, at home. An endless procession of snap-shots that you certainly "must have," if only to protect your reputation for truth-telling, will pop into view, and these never can be had from the photo-vendors.

The "best time" to make the trip is whenever it best agrees with your convenience and circumstances, remembering that south of the equator seasonal conditions obtain the opposite of those at the north in equal latitudes. The climate of Buenos Aires, for example, is much like that of New Orleans.

What is one to see on this excursion? Proper satisfaction of this question might mean an octavo volume, such as that lately published by Miss Annie Peck. The first anchorage is off the oldest and one of the most picturesque settlements in Brazil, Bahia, where unaccustomed sights will give the

A park scene near Santos

camera plenty of exercise. The stay of a few hours gives plenty of opportunity for a rapid glance at life in an antique-modern Portuguese town. Here, as in every other port touched, transportation facilities are up to date and of moderate cost.

The harbor and city of Rio de Janeiro are two days farther south and many have been the attempts to make competent and satisfactory word-pictures of them. The best anyone has done, is to call Rio "the most beautiful city in the world," and it can be safely left with that description.

A few hours after leaving the great harbor of Rio, and its distinguishing feature, the Sugar-Loaf, we enter, between rocky hills, a narrow S-shaped canal that soon conducts us to a little town built on a filled-in swamp. This is Santos, the port from which is ex-

ported such enormous quantities of pure "Mocha" and "Java." It is also the port of entrance to Sao Paulo, a city of size and importance, some two hours away up in the hills, near which all this genuine "Mocha" and "Java" coffee is grown.

From Santos a stretch of three days brings us to the entrance to the River Plate, whose mouth is some 125 miles wide, and to the harbor of Montevideo, capital of the Republic of Uruguay. This is a busy and progressive modern city, and, like its neighbor Buenos Aires, ten hours distant, it is decidedly tinctured with foreign influence. The latter city, in point of importance, wealth, and application of advanced ideas, is well to the front. It bears, indeed, the modest title, "Paris of America."

Buenos Aires is "some town." Sunday is its chief day, and its show place is the hippodrome, or race-track. Here is a dazzling exhibition of Argentine beauty and wealth, that may well rival any similar congregation on the European continent. At this important social function Colonel Roosevelt met the chief representatives of the government. During the last fiscal year the Jockey Club Racing Association netted five million dollars.

From this sorry skeleton of a sketch many important places are missing for want of space. The homeward trip may be made in several directions, to taste, the Lamport and Holt Steamship Company having made arrangements with other connecting lines to this end. For example, we may return *via* the straits of Magellan or across the Andes to Valparaiso during mid-winter (the northern one); thence to Panama. Or we may go by way of England. Or we may return up the coast, bending to the westward at Cape St. Roque, touching at Trinidad and Barbadoes, and coasting along the Windward Islands. The fascinating beauties of these islands are to be seen but have not been adequately described.

A rescue from the sea. Group around rescued man.

Old Portugese fortress at Santos

MY SIX-THOUSAND-MILE OCEAN TRIP

By C. E. Witham, M. D., Lawrence, Kansas

WHEN worn and jaded by the ills of humanity, take a vacation, and, if possible, see other lands and other people. Most of the world is aqueous, so sail the oceans. The man who sees but the land knows only a little of the world. Take a six-thousand-mile vacation like mine.

From the crest of Telegraph Hill, in San Francisco, we look down upon the bay, forty miles long and five to twelve miles wide, where all the navies of the world might ride securely together. The Golden Gate, five miles long and one mile wide, is the only inlet from the Pacific Ocean. During July and August the city is enveloped in fog from 10 a. m. to 4 p. m., making

a semi-night of the day. The fog comes in through the Golden Gate like a perpendicular wall. Look! See that vessel! As it seeks an exit to the ocean, it strikes the fog-wall and is as instantly lost to view as though it had gone to the bottom of the sea.

Before starting on our trip let us take a look at Chinatown. Here we may learn what otherwise would cost us a visit to China. Our observations, in its theater, subterranean gambling and opium-smoking hells, and its unique shows, would not look well in print. So let us go to the temple and see the idols. Entering we find on the right a doctor's office where herbs and roots are weighed out in wooden balances. Then we turn to the left, to the priest's office. We are received in a most cordial manner. The priest made us a cup of tea without sugar or cream, in a vessel about three times as large as a ladies' thimble. We found it the most palatable we had ever tasted.

This office was a storehouse of Chinese curios. The priest made us several presents, and we bought joss sticks from him. Passing on, we found ourselves in the presence of the huge, ugly painted idols, and their kneeling worshippers, with hats on! In one room several kinds of food were spread out before the wooden gods. A missionary told me that after a while the worshipers would return and themselves eat the remnants left by the gods!

Passing out by the priest's office, we learned more of this style of worship. On the floor lay a large club and near by was a bell. The worshiper would purchase a prayer on a piece of paper which (after striking the bell with the club, to notify the invisible deity) he thrust into an oven to be burned and thus ascend to his gods!

We are on board an ocean steamer and after plunging into the wall of fog and passing through the Golden Gate, we find ourselves on the Pacific, the prow of our ship turned southward. Our crew consists of Chinamen on their first voyage. At the dining table, twelve languages are spoken, representing people from a good part of the world. In giving our orders, the Chinaman would repeat the words until he had them correct, and we always got what we ordered. A six-foot Chinaman, who appeared to understand our twelve languages, acted as interpreter.

For weeks we passed through all kinds of experiences. One morning, after a stormy night, we saw four large waterspouts. They are seldom seen, and generally not more than one at a time. One day we passed a becalmed ship; it was out of coal, and there was no wind for its sails. We gave the captain charts and maps. The vessel was returning from a voyage of discovery in South America.

At night we gazed upon the constellation of the Southern Cross, only seen within the tropics. These stars are colored suns; some of them double. Their planets cannot be seen, but we know that it is the legitimate business of suns to have worlds upon which to shine, so they must have theirs. The double-colored suns illuminate their worlds with different colored light. Think of a day of blue shading and blending with a day of green! Such are some of the unseen glories of the Universe.

At one port in Central America the natives (all minus clothing excepting a breech cloth) rowed out to greet us and dispose of their tropical fruit. We drew the fruit up by a line and paid for it by throwing silver coin into the water for them to dive after. They always returned with the coin. Their expertness amused us more than their fruit pleased our palates.

One of our passengers was a dog about twelve years old. It had always been on ship-board and was an expert in many ways; he could climb a mast and do other sailor jobs. He was a pet on board and appreciated caressing. His owner, a sea captain, was taking him to Boston as a superannuated pet. One day I missed him and was told by his owner that he had thrown the dog overboard because he could not execute his former exploits. I can never forget the sailor dog. His fate was an illustration of the fact that man's gratitude is less to be relied upon than that of a dog. We had one passenger-dog which came aboard at 'Frisco to bid adieu to departing friends and failed to leave the ship in time. She too became a pet and gained notoriety and showed good breeding by hunting up a spittoon in which to vomit when seasick!

One of our most interesting ports was Acapulco in Mexico—a city of paved streets, but without carriages, as far as I could see or learn. Mountains go up high on all sides, and the entrance to the harbor is between overlapping ranges. It is one of the hottest places in the world. At the south end of the city stands a banyan tree, which is calculated to excite admiration. Its branches spread out, turn down and take root in the ground, and then sprout up, each one making another tree! Think of such a grove of trees, with but one parent root.

Nearby on a hill stands the ruins of a temple destroyed by an earthquake. At the foot

of the hill is a new structure taking the place of the ruined one. The door being open, I went in. It is the custom in Catholic countries to have open doors at their churches and temples. I found a casket containing a representation of a corpse. On its head was a crown of thorns. On stated occasions, this casket is borne upon the shoulders of men through the streets at the head of a procession.

But let us visit the old fort. When the French were here they bombarded it on the ocean side. The Mexicans retired to the mountains and bombarded it on the land side. No repairs had been made on the land side where the walls had been shattered and the cannon which had been displaced still remained, leaning against the wall. At the entrance I found the guard asleep and took the risk of passing in. Nearing the center, I was halted by an inner guard and turned back after a pleasant conversation with him, and got past the outer sleeping guard without wakening him. I passed a sidewalk merchant who had his goods displayed on the walk. He had fallen asleep, and I could have purchased at my own price, but passed on.

Acapulco has a unique municipal waterworks system. In the center of the city there is a large deep well with a street graded down to the water. The native women fill their gallon jars and place them on their heads so well balanced as not to need support, and march through the streets to their houses! The city also has a unique public laundry system. The people go to the shore of the bay, bathe themselves and their clothing and hang it on the bushes and bask about naked until their clothing is dry! I cannot say that this is a universal custom.

After three weeks of ocean voyage we stand on the seawall of the city of Panama. When the king of Spain was informed of the cost of the wall, he asked if it was made of gold. Looking five miles down the bay we see the ruins of old Panama. In its day it was, perhaps, the richest city in the world. It gained its wealth by the plunder of Peru. It reaped retribution when it was sacked and burned by Henry Morgan, the buccaneer, in 1670. It would be interesting to take you there, but space forbids. We left the Canal Zone with twelve million Mexican dollars on board, $3000 in a box. This treasure was guarded night and day by armed men.

With glass in hand, we stand on the deck of the Rising Star, plowing the Caribbean Sea. In the far distance we dimply discern a cloud-like something, the size of a man's hand. It grows until we can see it to be the smoke of an approaching steamer. It proves to be the ship Bienville, bound for Colon. We gazed at its passengers as they stood on deck, and exchanged papers and greetings. How little did we anticipate the immediate fate of the ship; at twelve o'clock that night the Bienville burned, exploded, and went to the bottom!

Passing other events of interest, let us go to Jamaica, and note "The Sunken City in the Sea—Port Royal."

One of the most interesting spots the vacation-trotter may visit is the city of Kingston, Jamaica. The natives are mostly blacks, formerly slaves. They build sidewalks with a cross-wall at each end in front of their homes. The black woman on the street cries: "Ginger beer, ice-cold ginger beer, ten cents a drink!"

We order a drink, and then another, when she changes her song to: "Two drinks for a quarter"—her wholesale rate!

We pay a bright American quarter and pass on. We are arrested by the cry: "Stop, Sam!" She presents the quarter and shakes her head. She wants a Spanish quarter. The exchange is made with an old worn coin.

Everywhere we are hailed by such cries as these: "Sam, buy this."

"Come, my honey, and buy."

Then, "How is Uncle Sam?"

In Jamaica it is a rare thing to find a person able to tell who his father is. This is the statement of a missionary.

In passing over the city, we find the corners of the streets protected by old iron cannon placed endwise in the ground. In their day they belched forth their murderous fire for the buccaneers. But when the nations combined to exterminate the pirates the captured vessels were brought here. So now the cannons are rendering a peaceful service.

Entering the harbor of Kingston, we pass to the left of a floating buoy which is anchored to the spire of a church. In 1692 Port Royal went down in an earthquake, carrying twelve thousand inhabitants to the bottom of the sea. On a clear day, when the surface is placid, one may see something of the buildings under the sea. Poe's description is apropos:

Here death has sunk himself a throne,
In a strange city,—submerged, alone,
There spires and palaces rest, and towers,
Slimy, coral-crested—all unlike ours.
No cheerful rays from heaven ever come down,
On the long night-time of that fated town;
Only ghostlight, from out the lurid sea,
Streams up the pinnacles, far and free;
Up domes, up spires, up weird halls,
Up fanes, up looming walls.

I fancied the obsequies of the dead city. Our ship lay moored at night in Kingston harbor. The winds were asleep, the sea placid, and the moon burnished a shining silvery path over the water. On a neighboring ship a band was playing enchanting music. I fancied the strains were funeral dirges, and the silvery moonshine burnishing the water to be the winding shroud of the sunken city.

A little of the geology of Jamaica will help us to understand how its cities easily slide into the sea. The island was born a mountain. Ages of tropical rains brought the detritus down, forming the plains on which the cities are built. Naturally, an earthquake shock causes these deposits to slide. So the recent earthquakes have caused Port Royal to sink further.

Thirty eventful days, from the Golden Gate to Sandy Hook, and only partly told. By it we have gained an enlarged view of humanity, a more exalted appreciation of our own country—and added ten years to our mundane life.

Epicorneascleritis

By FLAVEL B. TIFFANY, Kansas City

EPICORNEASCLERITIS would be an appropriate name for a pathological condition of the cornea extending to the sclera, in which there is a dense neoplasm with more or less vascularity; but it is neither a simple, superficial keratitis, nor is it a simple pannus, episcleritis, symblepharon or pterygium. It is a combination of most, and in many cases of all, of these conditions. The epithelial layer embracing Bowman's membrane is hypertrophied, opaque, and oftentimes traversed by blood-vessels.

These pathological conditions are usually the result of a long-standing, chronic inflammation having its origin primarily in the epithelium of the cornea and ocular conjunctiva. The palpebral portion of the conjunctiva may be entirely free. Vernal catarrh and episcleritis are among the most frequent forerunners of these complications. Pannus crassus may have existed for a long time, with Bowman's membrane so vascular as to give the cornea the appearance of a piece of raw beef. Later on this vascular pseudomembrane clears up, assuming the form of pannus tenuae. The blood-vessels have become attenuated and the membrane is thick and only partially transparent.

In some cases, there is great photophobia, the patient not being able to tolerate a ray of light; in other cases, the cornea has lost in large measure its sensibility and is more tolerant than the normal cornea of light or of irritating foreign substances. Patients in whom the disease has advanced to this stage usually have suffered long and submitted to all kinds of treatment, but to little purpose. Frequently it is only when they have become nearly blind and scarcely can grope their way about that they seek the specialist's advice and treatment. And then even the expert may be unable to help them.

Let me cite a case. A farmer suffering from conditions such as I have outlined consulted me a few weeks ago. He represents only one of the many such patients that visit our office annually. The treatment I have employed has given good results.

In old chronic cases having the hypertrophied pseudomembrane anterior to the epithelial layer, I make an extended syndectomy. I say "extended," for I remove the greater portion of the hypertrophied, opaque pseudomembrane of the cornea. Ordinarily in making syndectomy we make an incision through the conjunctiva and subconjunctiva down to the sclera, and then dissect up this band and cut it off at the limbus, girdling the eye, as it were, and cutting off all the blood-vessels to the cornea. In complicated cases, I do not stop at the limbus, but dissect or shave away the epithelial layer down to Bowman's membrane.

In the case under consideration, there was in the right eye some symblepharon, a band extending from the palpebral conjunctiva even on to the cornea. This I dissected loose from the cornea, tucking it back into the retrotarsal fold. On the left eye I not only made a syndectomy but removed all, or nearly all, of the epithelial layer of the cornea down to Bowman's membrane. This cleared the cornea so much as to bring the pupil into view, and the vision became perceptibly improved. The cornea continued to clear, and up to the present writing the vision is fully as good as was that of the right eye when the patient came to our office. There was no conicity or staphyloma of the cornea following the operation.

What Others are Doing

PERCUTANEOUS APPLICATION OF DRUGS

With a view to obtaining the benefits of drug treatment without taxing the digestive apparatus, Fischel and Schoenwald (*Med. Klin.*, 1914, No. 5, p. 197) have used, in the form of percutaneous application (inunction), a preparation called sputolysin. They tried it in 67 cases of pulmonary tuberculosis, obtaining positive results in 66 of these patients; they report their experiences in the *Medizinische Klinik*.

Sputolysin is a complex mixture of the following formula:

Antimony and potassium tartrate	0.03
Extract of belladonna	0.10
Balsam of Peru	1.0
Oil of turpentine	1.0
Potassium iodide	0.5
Guaiacum	2.5
Camphor	3.0
Liquid paraffin	5.0
Soft soap	7.5
Lanolin	17.5

Divide into 6 equal portions.

One application is to be made daily, in a different place each time. On the seventh day a cleansing bath is ordered. After a rest of one or two days, repeat the six-days' course of treatment.

The author reports a prompt and beneficial effect on cough, expectoration, pain, and fever. The appetite was improved in consequence, and the general condition of the patients ameliorated.

SPRUE TREATED WITH EMETINE HYDROCHLORIDE

In 1907 Cantlie advocated the use of ipecac in the treatment of sprue, a well-known form of tropical diarrhea associated with sore mouth. Now Schmitter reports his experience with six cases of the disease treated with emetine. The first suggestion as to its value in these cases came from Ashburn, who treated a patient suffering both from sprue and amebic dysentery. Not only did the entameba disappear from the stools, but the sprue symptoms improved under the same treatment.

In all of the six cases of sprue reported by Schmitter (*Milit. Surg.*, Apr., p. 330), there was improvement; the mouth ulcers were decidedly better in twenty-four hours, and in some cases there was complete healing within forty-eight hours. All of these patients also complained of a feeling of tension across the upper abdomen, but this symptom was generally relieved soon after the emetine treatment was begun.

EMETINE IN HEMOPTYSIS

In preced'ng issues of CLINICAL MEDICINE we have called attention to the remarkable results following the hypodermic administration of emetine in hemoptysis. Not only have the French authors pointed out that the drug frequently stops bleeding from the lungs almost instantaneously, but it has been tried by one of our own correspondents, Dr. C. S. Cope, of Detroit, and with brilliant success in one very severe case. Another, similar, case was reported by Aubert and Bouyer, in the *Journal de Medecine de Bordeaux* for January 18.

The patient was a young woman, sixteen years of age, who two years before had suffered from nasopharyngeal diphtheria, complicated with bronchopneumonia. She had two recurrences, associated with anginal paralysis and bronchopneumonia. The latter complication left behind a hemorrhagic disease of the lungs, which had persisted for two years. There was a bloody, purulent, odorless expectoration, from time to time occurring in paroxysms. On one occasion she lost two liters of blood in four hours. The bacillus of Loeffler had persisted for eighteen months in the throat and nose, and this was associated in the sputum with streptococci and staphylococci, and sometimes pneumococci. However, there was no fever, and her general condition was good.

All the usual hemostatic drugs had been employed, without success. Emetine was then administered, with the following results:

The expectoration continued, being now grayish-green colored, but becoming again chocolate-colored after the medication had ceased; the paroxysms of hemorrhage, however, were arrested with each injection. During one access of the hemoptysis, when there was a loss of two liters of blood, emetine was given; and in this instance it proved providentially efficacious. The drug was administered for a month, and produced no toxic symptoms and no habituation. In what manner this drug acts in cases like this, the authors are unable to explain.

Evidence continues to accumulate to prove the great value of emetine injections in arresting hemorrhages from the lung—and also from from other localities.

TECHNIC OF ANTITYPHOID VACCINATION

In view of the interest now taken in typhoid prophylaxis, the technic of the vaccination must be of interest to every physician. F. W. Foxworthy, writing in *The Military Surgeon* for April, gives the following concise directions:

"The medical officer, with sleeves rolled up to the elbow, nails carefully manicured, must have his hands thoroughly cleansed by the use of brush, soap and hot water, and then soak his hands in a 1 : 1000 bichloride or equivalent solution; with the left sleeve of each applicant rolled to the shoulder, the assistant paints with iodine a spot a little larger than a silver dollar on the posterior part of the middle third of the arm.

"The surgeon, after thorough sterilization, takes the three-cornered file, which has been boiled with the needles and syringe in a 2-percent soda solution, and files off the neck of the tube containing the vaccine. Usually a slight nick in the neck of the tube is sufficient to break off the top of it. These tubes have previously been submerged in a small receptacle filled with alcohol. For the first dose 1-2 cubic centimeter is drawn into the syringe, care being taken that no air bubbles remain. For the second and third dose, 1 cubic centimeter is drawn into the syringe.

"Grasping the arm firmly so as to pull up the skin lightly over the spot painted with iodine, the hypodermic needle is introduced subcutaneously. This must not be into the muscular tissue nor into the skin alone. The sleeve is to remain rolled up until the spot has dried. The needle is then unscrewed and put back into the boiling solution in the sterilizer and another needle is taken out of the solution with the small forceps and attached to the syringe. If care be used, it is unnecessary for the fingers of the surgeon to touch the spot of the injection or to attach the needle to the syringe, which can be done with the forceps."

ANTISEPTIC VARNISH FOR SURGEONS: MASTISOL, STERESOL

In our February number (p. 155), mention was made of a bactericide varnish—*steresol*—composed of Peru balsam, acetic acid, castor-oil, and alcohol; this to serve surgeons in lieu of rubber gloves when operating or in gynecologic work.

We now happen across another formula of a similar nature, and claimed to yield a preparation giving fully as good satisfaction as a certain German proprietary marketed under the name of *mastisol*. This combination was developed by Doctor Borchardt (*Bruns Beitr. z. Chir.*, Bd. 87, No. 2), who had been using the mastisol (but found it rather costly), and is as follows: Finest mastic, Gm. 40; purest benzol, Gm. 60; castor-oil, gtt. 20. Dissolve, let stand, then filter. (Do not confuse benzol with benzin!)

This varnish markedly inhibits the development of strepto- and staphylococci. If the brush with which it is laid on becomes infected, it can be sterilized by immersing it in the liquid for an hour. This varnish, the author suggests, should be carried in the surgical bag. It may be strengthened by adding 3 to 6 percent of iodine. In case of ablations, the varnish may be applied after painting the field with iodine.

INFLUENCE OF SMOKING UPON THE BLOOD-VESSELS

With the aid of an ingeniously constructed apparatus closely permitting a fair imitation of the conditions of smoking by men, H. Schmiedel, of the Pathologic Institute of Bruenn (Austria), has been conducting experiments with rabbits, with a view to ascertaining what effect tobacco smoke has upon the vascular system.

Without exception, the animals (adequately controlled) were found (*Frankf. Zeit. f. Path.*; cf. *Muench. Med. Woch.*, 1913, p. 1679) to have acquired alteration of the tunica media of the aorta, this lesion exhibiting considerable similarity with the corresponding

necrosis in man. All question as to this condition being caused by elements in the smoke was eliminated.

THE TREATMENT OF SCIATICA

The first indication in the treatment of sciatica is rest—so declares F. X. Dercum, in *The Therapeutic Gazette* for April, p. 239. Sometimes rest in bed is sufficient; at other times it is necessary to place the limb in a splint. Next in value to rest is a course of sodium salicylate, which, though, must be given in full doses; and it is Doctor Dercum's custom to combine it with sodium bromide, 10 to 20 grains of the former and 20 to 30 grains of the latter, given every four hours. If these drugs are well diluted, these rather large doses will be well borne by the stomach.

It is important to make massive impression with the salicylate within the first twenty-four to forty-eight hours, after which the dosage of the salicylate and the bromide may be rapidly diminished. In very severe cases, Doctor Dercum relieves the pain by means of the hypodermic injection of morphine and scopolamine (hyoscine).

THE ALKALOIDS OF QUEBRACHO

Quebracho contains at least five alkaloids—quebrachine, aspidospermine, quebrachamine, aspidospamine, and hypoquebrachine. The first four have been carefully tested pharmacologically by Douglas Cow, who reports his findings in the March number of *The Journal of Pharmacology and Experimental Therapeutics*. His investigations were carried out on rabbits, cats, dogs, and frogs, and some very interesting data were accumulated.

First of all, Doctor Cow was able to determine that all these alkaloids, when given in small doses (1 to 2 milligrams) increased the depth of respiratory movements as well as the rate of respiration. Quebrachine is the most powerfully toxic of the group, aspidospermine being only slightly less poisonous as regards respiratory action, while quebrachamine and aspidospamine are found to be much less poisonous. The general action of aspidospermine and of quebrachine is much alike. Both of these drugs very decidedly augment the depth of the respiratory movements. The effect on the rate is much less marked, but the tendency is to quicken it. The two weaker alkaloids, while they increase the depth of respiration, rarely influence the rate in any appreciable degree.

All of the quebracho alkaloids slow the frog's heart and reduce its tonus and the strength of its beat. The rhythm is not disturbed unless very large doses are employed. The action is much the same on the hearts of mammals, all four of the alkaloids slowing it and diminishing the strength of its beat. Aspidospamine is an exception with regard to the influence upon the tonus, which it very slightly increases. The rhythm is likely to be disturbed, whichever alkaloid be used. The order of cardiac toxicity of the four alkaloids is the same as for their respiratory toxicity. The action upon the blood-vessels, it was observed, was to constringe them slightly; this being most decided in the case of aspidospermine, and least with quebrachamine—indeed, not infrequently the latter had no such effect.

In small doses, quebrachine exerts a stimulant action on the central nervous system; and in this respect the other four alkaloids resemble it, although their action is weaker. In large doses, paralysis of the nerve-cells is produced, while in still larger doses paralysis of the vagus and the sympathetic nerves and of the motor nerve-endings may follow. In overdosage, quebrachine causes death by paralyzing the respiratory centers at a time when the motor nerves still are responsive to electrical stimulation.

AMEBIC DYSENTERY OF THIRTEEN YEARS' DURATION CURED WITH EMETINE

Another illustration of the fact that amebic dysentery is not extremely rare in this latitude is shown by the experience of T. W. McCaskey (*Jour. Amer. Med. Assn.*, Feb. 14, 1914, p. 534), who has treated one suc case in a patient who had never been south of the Ohio River. Another case, which he describes in full, occurred in a woman of seventy, who thirteen years ago contracted acute dysentery while living in Tennessee. Since that time the trouble persisted. In the entire thirteen years she had passed not one single formed stool.

This old lady entered the hospital on September 8, 1913, and on the same day she received an injection of 2-3 grain of emetine hydrochloride. This caused mild nausea. The next day 1 grain was given, and this was followed by a more decided nausea, besides some abdominal distress. September 10 another grain of the alkaloid was injected, after which three days were allowed to elapse

before giving the next injection. On September 13 no amebas were found in the stool, but another grain of emetine was administered. After this, no more emetine was given for a considerable period, although on the 16th the patient had only three stools in twenty-four hours, the last of these being formed—the first, as already stated, within thirteen years.

By the 19th, the woman was feeling perfectly well, except that normal appetite had not returned. However, on the 23d of September, the diarrhea recurred and amebæ again were found in the stools. Meanwhile she had left the hopsital; but on September 30 she returned for treatment, and emetine was given for five consecutive days—2-3 of a grain daily for the first two days, and 1 grain a day for the next three. On October 8 another grain of the drug was administered, then 1 1-3 grain on the 13th, and 1 grain on the 17th. By this time she apparently was entirely cured.

An interesting feature of this case was the nausea and the abdominal distress induced by the injection. Doctor McCaskey is of the opinion that this was due, not so much to the direct pharmacologic action of the emetine, but, rather, to its specific action upon the myriads of amebas with which the intestinal wall undoubtedly was infiltrated. The liberation of the endogenous toxins from the killed parasites, he thinks, probably was responsible for the nausea, which in one instance came on rapidly fifty-six hours after a dose of the drug; and it scarcely is supposable, he remarks, that the action of this, or any other, remedy given hypodermically could be delayed so long.

PRACTICAL AND SUCCESSFUL TREATMENT FOR DIABETES

Some months ago a long article appeared in *The New York Medical Journal*, giving the remarkable experience of Doctor Beveridge of New York in the treatment of diabetes with the Bulgarian-bacillus tablets. More than 100 cases were reported, and relief was the rule, while in many cases sugar disappeared from the urine. Another important testimony to the value of this method of treatment comes from Dr. L. Napoleon Boston, who, in the April 25 issue of the same journal gives a report of 30 cases of diabetes, all private patients, treated by him between January 1 and September 15, 1913; these patients varying in age from 20 years to 60 years. All cases were well marked, 12 at least severe, and they showed an average loss of weight of 11 pounds. The percentage of sugar in the urine varied from less than 1 percent up to 5 percent. In only 13 did the quantity of sugar in the urine fall below 1 percent.

Treatment consisted in controlled diet, according to the usual plan; the use of codeine sulphate, oxgall, and pancreatic extract, as indicated (which suggests the well-known bilein and pancreatin compound with which many of our readers are familiar); but the special phase of the treatment which attracts our attention is the fact that Doctor Boston used the Bulgarian bacillus with success. Of the 30 cases, only 3, or 10 percent, failed to show improvement as a result of the method of treatment employed. In many of the cases the improvement was very marked. Fifteen cases are reported in detail. Of these cases, Nos. 3 and 7 are the only ones in which the sugar did not disappear entirely after treatment. Only 1 of these cases died.

On the whole, the method of treatment employed by Doctor Boston seems a very promising one. Certainly the routine use of Bulgarian bacilli in the treatment of diabetes seems to be fully warranted.

AS TO THE SERODIAGNOSIS OF EPILEPSY

After a brief survey of the several attempts at applying serology for diagnostic, prognostic, and therapeutic purposes as to epilepsy —organically based and constitutional-dynamic—all of which efforts failed to fulfil the expectations of their originators, W. Mayer (of the department of nervous diseases of the University of Tuebingen) relates the outcome of his own investigations in this direction.

His findings (*Muench. Med. Woch.*, 1914, No. 13) are entirely negative as to either absolute or differential diagnostic value of the ninhydrin tests or allied serologic methods; these conclusions being based upon accurate clinical observation of 37 undoubted cases embracing the various forms, duration, degrees, in both sexes, and covering all ages. The organs tested for were: cerebral cortex, testes, ovaries, thyroid gland, suprarenal capsules, liver, pancreas, and kidneys. All tests were concurrently controlled.

Miscellaneous Articles

The Doctor's Income--And a Talk On Ethics

SOME time ago you called for statements from men in the field as to the amount of their incomes and other financial data, so, now that 1913 is a thing of the past, I am going to give you my own experience. But, inasmuch as I am going into personal history, I shall ask that you withhold my name and location, as I have no desire to toot my own horn, while the lack of this information will in no manner lessen the point of my story.

To begin with, I am thirty-two years old, and in my seventh year of general practice in a town of 8000 people. Being unable to get a suite of offices such as I desired, I built, summer before last, adjoining my residence, and put about $700 into the structure, including hardwood floors, hot-water heating, gas, electricity, and toilet-room adjoining the office and waiting-room. I consider this one of the best investments I ever made.

In a general way, I have always known approximately what I earned in a year; however, last year I made the effort to "book" all my transactions, keeping cash accounts and credits separate, so that I might know exactly what each branch of the work paid me and thus be enabled to devote my energies to developing that branch which paid best. I know I have not entered everything I have done, for many items will slip the mind (such as bills paid on the street, etc., which I neglect to enter), so that what I have record of is safe and conservative.

There are six other physicians, besides one chiropractic, located here, one of whom calls himself a specialist in obstetrics. The remainder are all doing general work, except that one also does refraction-work and supplies the glasses himself.

About three years ago I announced through the press that I did not take confinement-work. This was because I found that this class of work was the poorest pay of any and took the most of my time, in actual hours, of any other class of work. I did not stick to this absolutely, but continued to care for my old patients who were "good"; it gave me an excuse, though, to dodge the deadbeats—which was my original purpose.

I do almost all my own dispensing, not because we have no good druggist, but because my patients like it and, moreover, it is more convenient. As a source of income, it is not particularly a money-getter; it does bring me much business, however. I carry between $150 and $200 worth of drugs, this including bottles, labels, tablet-boxes, and other needful accessories. I buy only the best goods obtainable. The drugs themselves I get from the manufacturers or jobbers in original packages. A man who buys cheap drugs, to be dispensed by himself, is fooling only himself, and no one else. Our reputation as doctors depends entirely upon the results we get, and, in the long run, the cheap, low-grade drugs give poor results.

Our surrounding country is not well settled. The roads are in bad shape and the settlers are poor—most of them homesteaders, who make their living from the sale of pulp-wood and pine timber, which they get out in the winter. Their clearings will not average over 10 acres, and most of this land is in hay.

We are about an hour and a half's ride away from a town of 85,000, that is well provided with "specialists" and hospital facilities. The competition there is keen and prices suffer in consequence. We have to take this into consideration in making our charges.

We have a hospital here of about 15 beds, maintained to care for contract-work. Curious as it may seem, the fewer patients the hospital houses, the better the institution pays. Private cases, you see, require more care and attention and, so, are not welcome; in fact, admittance has been denied so often that we do not attempt to use the hospital at all. But, to get back to the starting- point.

I find that last year I took in cash, from office calls only, $1669. This includes every-

thing I did in the office—examinations, microscopical work, uranalysis, dressings, nose-, throat- and ear-work, minor surgery, and electrical and x-ray treatments. My drug dispensing brought in $267 cash. Calls into the country and about town altogether totaled but $468. I had only 8 confinements during the year, and they footed $185. Surgical work outside the office brought in $1338. This included fractures and some work hard to classify, being both medical, surgical, in the office, and after-calls to homes, all told, $202.

This makes a total of $4129 of which I have record, and, of course, represents all cash. Besides this, I booked, as credit, $2773. This makes a total business of $6902 for the year's work.

Just a word in regard to the surgical item. I have performed more than 100 laparotomies during the past three and one-half years, most of them emergency-cases (gallstones, appendectomies, and hernias), and a large majority of the operations were done in the homes of the patients, who had no skilled nursing either before or afterward. I lost but one such patient, and this in a hospital. This one was *in extremis* when first seen, being a case of peritonitis from a ruptured appendiceal abscess, and I did a "stab-and-drainage."

This record, I dare say, will compare very favorably with work done in big centers, considering the class of cases handled; and, to forestall any questions as to technic (aseptic), we had not to exceed 5 cases of mild stitch-infection in the whole series where no drainage was provided.

This will show that it is not necessary to send your best-paying class of cases away to someone who will knife you and tell your patient that "if he had come to 'the expert' sooner it would be an easy case, but now he was almost too far gone and the outcome was doubtful." When the patient recovers, as he nearly always does, a feather is added to the "expert's" cap and a nice $50 to the patient's bill.

I do not know how this showing compares with what other men are doing who are similarly situated. Someone has shown that the average income of the physicians of the United States is somewhere around $500 to $600. To any M. D. who is making less than $3000 a year, and who is not a newcomer but has established himself in the community, I would say that he either has made a mistake in the choice of his profession or that he had better change locations.

We have saw-filers in our town who make from $15 to $20 a day; men who work six days a week (although sometimes seven), who have no education, and who cannot write their names legibly. We have sawyers in the mills making from $6 to $8 per day regularly, some of them only twenty-four years old, and these men without a common-school training.

I was earning $85 per month (this is $1020 per year), and having my board and room furnished besides, while I was working in the engineering department of a transcontinental railroad, and before I had studied medicine; and, if I could not do considerably better than that in the practice of medicine, I think I should quit and go back to railroading or anything else where a living could be made without "being on tap" twenty-three hours of the twenty-four, with no extra pay for "overtime."

I believe the time has come when socalled "medical ethics" should be uprooted and cast from us; as practiced, our ethics is a farce, a delusion and a snare—like the countryman's version of a giraffe, given while looking at it: "T' hell! there aint no such animal."

By this I do not mean that we should have no ethics—far from it—but what we have should approach the ideal more closely than we ever can hope to do. As a result, it is not followed, except on paper.

Why, pray, should we have a different code of ethics for the practice of medicine than we do for our everyday life outside of it? Why should a doctor be permitted to lie and to cheat his patient, as so often is done in consultation-work, and be perfectly ethical when we would not stand for it in other lines of work outside of the sick-room?

We place ourselves upon a high and lofty pedestal, then proceed to bamboozle the public into the belief that we are practicing our profession for the love of it, that money considerations are secondary, and all that nonsense; then at night, when we think we are not observed, we descend to the earth and wallow in the mud with the hoi-polloi in a mad orgy. When, however, we clamber back to our sublime roost, some of the mud sticks to us, and the observant public sees it; whereat many a wink and smirk at our expense. We can't fool 'em *all* the time.

We must not advertise. This is most unethical, of course, according to the Lights in the Profession; but, if we happen to belong to the College of Surgeons—about which there has so much been said of late—we may have our photographs taken in our ceremonial

gowns and caps, and have them published in the *Daily Print*, with a short reading notice, to the effect that "this is the picture of the eminent Dr. Foozlebug, who is one of the five or six men in this state who has been admitted to the College of A. S. for meritorious work," and that he took an oath—here go on to state that he would not condescend to advertise nor in any way place himself before the public other than in a legitimate manner and in accordance with our accepted code of ethics.

I am telling of an actual experience in our immediate vicinity.

Is this not enough to make the rank and file laugh in unholy glee? Let us get back to the Golden Rule, and practice it as much as lies in our power. It will keep us busy, and, while following its precepts, we cannot go far from the right. If a man is skilled in a certain line of work, let him acquaint his townsmen of the fact and keep within the bounds of truth. If he does not promise impossible things and keeps the promises he makes, wherein does he stultify himself or the profession?

I myself do not advertise in any way, shape or manner, except in an occasional article in a medical journal, such as this one; still, I am seriously considering doing so, with the full knowledge of what will follow. I shall be dropped from my county medical society and automatically from the state society (I am secretary of one and delegate to the other); the holier-than-thou members of the profession will look at me askance and refuse to consult with me. Nevertheless, I probably shall earn more money and do better work, in a vindictive effort to "show 'em."

I do not intend to write a book on this subject—that has been done very ably, and much better than I could hope to do, by Dr. C. Elton Blanchard, of Youngstown, Ohio. If you have not read it, do so, and be a better man for it. No, I do not know the doctor and have no interest in the sale of the book, except to pass a good thing along.

Having unburdened myself of a load that has been simmering for some time and was about ready to pop, it has occurred to me that perhaps someone else may have a few ideas along these lines, either in accord with or diametrically opposed to mine own. If so, I for one should be glad to hear from him. Conditions vary with locality, and the more widely separated areas that are heard from, the better the lesson taught. I am located in one of the north middle-western states, and this is sufficient for all purposes. A. B.

[This is a contribution to the subject of medical economics from a man who has evidently made a financial success of his work; and, as such, it has a distinct and positive value. We may not altogether agree with everything he says; in fact, we don't. There is always, on the part of financially successful men, a disposition to be rather impatient of the man who fails to make that kind of success; to say, in effect, Here am I, making so many thousands a year—if you can't or don't make as much, you're a fool; and to regard his less fortunate neighbor as a failure. Something of this inclination, if he will forgive my saying so, is apparent in the writer of this article. It must be admitted, however, that, in the main, his attitude is right, and what he says is true.

One point in his article, particularly, is worth emphasizing; and I am glad he has had the courageous egotism to assert it. The general practitioner can, in a great many instances, do his own surgery just as well as the city specialist can; and it is foolish of him to send every surgical case to the city surgeon. The practitioner has nobody but himself to blame for degenerating into a mere feeder for the big man; and he loses thereby all sorts of prestige and income. Of course, it needs some special preparation and equipment, but that is precisely the moral of the situation—the medical graduate should make a point of availing himself of all the opportunities in this direction with which a modern professional education surrounds him, so as to be in a position to take advantage of this feature of his practice.

The suggestion made by this contributor that others express their opinions and relate their experiences as frankly as he has done, is an excellent one. It is a subject that badly needs free ventilation. As I have intimated I could say a good deal on the other side of A. B.'s position, but I much prefer to leave it to others of the family to argue the opposing brief out of their own experience. You have the floor.

As to advertising, we have just three words to say—"Don't do it." It never was good ethics, and the time was never less opportune to try to make it so than right now. We are searching men's lives and criticizing their motives more today than ever before.—Ed.]

MISTAKES SOME PHYSICIANS MAKE

Here are a few of the practices of physicians that are objectionable or even detrimental, and which, insignificant though some of them

may be, in themselves, may be injurious to their best interests, and, consequently, should be abandoned. Of course, this list easily could be extended. I will enumerate:

1. Wrapping bottles and boxes of medicine in paper torn from medical journals or containing patent-medicine advertisements.

2. Giving medical advice free to several families at once when someone asks the physician over the party-telephone what is the best thing to do in this or that trouble. In this way the physician often gives advice to enemies who would not call upon him in case of sickness—knowledge that cost him years of hard study and thousands of dollars in money to obtain. These people pick it off the line, when the physician intended it to be of service to one of his friends and patrons.

3. Recommending solution of hydrogen dioxide, instead of prescribing some other antiseptic. The laity are wise on this point, and, as a result, the physicians lose several dollars a year in throat-disease cases alone. When the laity have throat trouble or a sore of any kind, they make for their peroxide bottle, which they bought at a bargain-counter for 10 cents a pint. Physicians have taught the laity this, without due compensation, and, as a result, each physician loses in this very way from five dollars to twenty-five dollars in the course of a year. The amount any one physician loses depends upon the extent of his practice.

4. A physician makes an unpardonable mistake by telling his patients what drugs he is using. I never have done it, and never shall. If they want to know, let them find out by taking the route we took.

5. Another mistake physicians make is in their failure to get together and adjust their fees in proportion to their expenses. Other professional and business men do this, then why don't physicians?

6. School-teachers now receive from ten to fifty dollars a month more than they did ten years ago, but physicians charge the same old measly fifty cents for diagnosis and medicine that they did ten years ago, and go from one to ten miles on a confinement case for a ten-dollar fee. (In some localities, though, this condition has been changed.) Fees for visits in villages and towns, and also stop-in visits in the country, were one dollar ten years ago, and they are the same today. Shame on us.

7. It is a mistake to let the laity determine the distance the doctor travels and to fix the fee, as is so often done. The average client only takes one thing into consideration, and that is, he wants the work done as cheaply as possible. He never takes into consideration the distance, weather, condition of roads, the time the doctor is called (whether by day or night), his responsibility, his exposure to contagious diseases, his boycott by others due to this exposure, and the many other factors entering into the value of his services that might be mentioned.

8. Our county medical societies, if they would, could do much for its members and the profession in general—but what do they do? What special advantage has it been to you to belong to your medical society? If it has done anything for you in a financial way, it is an exception, and not the rule. Unless a physician can be a benefit to the county medical society, or receive from it a benefit, why belong? Am I right or wrong? I am after information. Who will give it?

O. C. Church.

Greenville, Ill.

DIARRHEA IN CHILDREN

Dr. E. H. Sholl, of Birmingham, Alabama, who has been engaged in the practice of medicine for fifty-eight years, gives a brief résumé of his method of treating diarrheas of childhood.

When the patients are breast-fed children, Doctor Sholl gives 1-4 grain of calomel every two hours for four doses, followed in four hours by a dose of castor-oil. The child is deprived of the breast for twenty-four hours, but is given barley-water and bismuth.

Bottle-fed babies are placed upon the same preliminary treatment, with barley-water and buttermilk if there is no change; also 1-100 grain of mercury bichloride every two hours while the patient is awake, this being continued, if necessary, to the point of salivation.

CHICAGO MEDICAL SOCIETY MEETING OF ALIENISTS AND NEUROLOGISTS

The Chicago Medical Society will hold its third annual meeting of alienists and neurologists of the United States, for the discussion of mental diseases in their various phases, July 14 to 18.

It is the object of the Society to have a scientific program, one that will be beneficial to every physician, whether connected with an asylum or sanitarium or in general practice. The meeting will be devoted to the discussion of the manifold causes of insanity and its prevention; also the conditions caus-

ing mental defectives. The criminologic aspects also will be considered. The public will be invited. Furthermore, suitable legislative measures are to be reported upon. A special committee will report on what constitutes a modern hospital or asylum, and what the duties of the State to physician who makes the care of the insane and mental defectives a specialty.

Arrangements have been made with the postgraduate schools of Chicago to give a complimentary course in all lines of work for the remaining days of July. This course will embrace internal medicine, surgery and special regional surgery, cystoscopy, radiology, brain pathology, vaccine making, the Wassermann test, and others. The superintendents and attending physicians are invited to avail themselves of this opportunity for the complimentary course. Tickets for admission to this course can be obtained from the Secretary during the meeting. All communications should be addressed to Dr. W. T. Mefford, 2159 West Madison Street.

AMERICAN ASSOCIATION OF PROGRESSIVE MEDICINE

We are informed that the third annual convention of the American Association of Progressive Medicine, a nonsectarian organization, will be held at the Planters Hotel, St. Louis, Missouri, September 8–11. Dr. H. R. Powell, well-known to the readers of this journal, is president of the Association.

THE TREATMENT OF MUCOUS COLITIS

In your editorial in the May issue you quote Dr. W. A. Evans: "Treatment of mucous colitis is most unsatisfactory." Will you kindly permit me to show that this statement is erroneous.

There are different theories in regard to the etiology of mucous colic, but none of them is plausible, except the atonia-theory.

Mucous colic is truly and positively one of the manifestations of atonia gastrica. Whether enteroptosia is the cause of mucous colic in all cases, has to be decided by further observation. Thus far some writers have paid attention to the coexistence of enteroptosia in cases of mucous colic; but this is all, none of them has thought of a relation between the two.

A positive fact is that the symptoms of mucous colic have disappeared, that permanent cures resulted after the abdominal plaster belt had been applied. Mucous colic was relieved by means of relieving enteroptosia.

When I spoke, on October 29, 1908, before the Philadelphia County Medical Society, of my experience in the treatment of mucous colic by means of the plaster belt, I added that I felt embarrassed to tell them, as a fact, how after application of the belt mucous colic was relieved promptly, completely, and permanently, fearing that I might be accused of exaggeration. Thereupon one of the members of the society rose and confirmed all the praise I had given, and proceeded to describe a case of eight years' standing in which a complete recovery had been obtained—exactly as I had mentioned—promptly, completely, and permanently, after the strapping.

Enteroptosia is very frequent and mucous colic is rare; but that does not exclude that mucous colic can be one of the many kinds of manifestations of enteroptosia. Enteroptosia in women does not always cause dysmenorrhoea, and in men and women not always colic; nevertheless, mucous colic as well as dysmenorrhoea may be caused by enteroptosia.

I beg to refer to my numerous publications on the subject.

What I have said here about mucous colic refers *eo ipso* to mucous colitis.

A. Rose.

New York, N. Y.

[In this article we follow Doctor Rose's spelling exactly, in accordance with his special request.—Ed.]

CALCIUM SULPHIDE AS A PROPHYLACTIC AGAINST SMALLPOX AND OTHER INFECTIONS

I wish to call the attention of the readers of your valuable journal to a few experiences I have had with calcium sulphide as a prophylactic in some contagious diseases and other conditions.

A few years ago I was called to a negro, whom I found with a well-developed smallpox. The sanitary conditions of the place were very bad. I immediately reported the case, by telephone, to the county health-officer. As it was in the winter and the roads were very bad, the latter requested me to look after the case for him. I knew it would be several days before I could get any vaccine virus, and that before I could do so the whole family probably would be sick with the disease; so, under the circumstances, I determined to give calcium sulphide a good trial.

There were seven persons in the family, including the sick man, all adults.

Calling again the following day, I gave them a supply of calcium-sulphide, ordering each of the well persons to take 1-grain doses every two hours the first day, and 1 grain every four hours during the day for a week thereafter. For the sick man, I prescribed 2-grain doses every two hours the first day. When I first saw the man, the pustules were beginning to form. On my second visit, the day when I began with the calcium sulphide, the pustules were beginning to "pit." When I paid my third visit, and the patient had taken the remedy for twenty-four hours, I found the disease arrested: all the pustules seemingly drying up. The man improved rapidly and recovered without further trouble. No other member of the family had the disease, although no other precautions or preventives were used.

Some time after this experience we had an epidemic of measles in my territory. Remembering my experience with the calcium sulphide in smallpox, I decided to try it in measles. In every case that I used it, the disease was aborted; furthermore, not a person whose system was saturated with calcium sulphide, regardless of the amount of exposure to contagion, contracted measles.

A little later I was called to a negro family in my town. Besides the husband and wife, there were three children, whose ages were seven, five, and three years; and the oldest,a a girl, had a well-developed case of diphtheria. False membrane had formed on the fauces.

I gave her a thorough purging with calomel and podophyllin; also ordered a throat-wash of a saturated solution of potassium chlorate and tincture of iron. I had some 1-4-grain calcium-sulphide tablets. As a prophylactic measure, I prescribed for the youngest child 1 tablet, 2 tablets for the next, and 3 tablets for the oldest; repeated every two hours the first day, then every four hours during the day for a week. When I called the next time, all false membrane in the throat of the sick child had disappeared. In the throat of the second child just a little redness was observed. The youngest one showed no symptoms of any kind. The disease made no further progress in either of the older children, while the youngest escaped entirely. These negroes lived in a one-room cabin, where they cooked, ate, and slept, the sanitary conditions being most undesirable.

During the winter of 1911 and 1912, we had an epidemic of whooping-cough in our town. It is needless to say here that in treating this disease I tried all the remedies that are recommended by the authorities. The remedy that gave me the most satisfactory results was calcium sulphide—*not* recommended by the authorities. I must confess, however, that I tried it in only two cases. The first was an infant 8 months old. As soon as the disease appeared, I put him on 1-4-grain doses of calcium sulphide every four hours during the day, besides instructing the mother to keep the baby's bowels open. The child was teething just then, and "cut" four teeth during the time. The patient was sick only about two weeks and lost one pound in weight.

The second case was that of a frail little girl about two years old. As soon as I learned she had been exposed to the disease, I put her on 1-4-grain calcium sulphide every four hours during the day. However, I first thoroughly unloaded the bowels with small doses of calomel and podophyllin given to effect. While the remedy did not prevent nor cure the disease, and the child had a moderate cough for four or five weeks, I feel sure the sulphide was beneficial, for her general health was not impaired in the least, while at no time did she have any paroxysms such as usually are seen.

I have a lady patron who (as she expresses it) "suffers death" from carsickness if she is on a train for four or five hours. Telling me this, she also said she had to make a trip of three or four days' duration, and wanted me, if possible, to give her something to prevent the attack. As an "inspiration," I gave her some 1-grain calcium-sulphide tablets, instructing her first to unload her bowels thoroughly, and on the day before expecting to start on her journey to begin taking one tablet every two hours during the day; then, after the first day, to take one every three hours during the day until she reached her destination. Also, to pursue the same course when she was ready to start for home. The woman was gone several weeks, and on her return told me that she did not have one symptom of carsickness while she was gone.

After this experiment, I felt a strong desire to test the remedy in seasickness. I have a gentleman friend (not a physician) who has large business interests in Santo Domingo and makes frequent trips from New York to that island. I mentioned to him my wish to test this remedy as a preventive of seasickness, and he kindly consented to aid me. He reported that in several instances [Fellow passengers?—Ed.] very good results had been obtained. The most marked case was that

of a man past sixty years of age who had never been on an ocean voyage. My friend prevailed upon him to take a thorough purge and to begin on the day before sailing to take the calcium-sulphide tablets, 1 grain every two hours during the day, and then 1 grain every four hours for the next four days. While it took ten days to make the trip from New York to Santo Domingo, this man never missed a meal during the whole voyage.

Now, although "one swallow does not make a summer," surely such experiences entitle calcium sulphide to a trial in seasickness and allied disturbances. Not to forget, moreover, all the communicable diseases.

Friars Point, Miss. H. C. Buck.

[Doctor Buck's experience is very interesting. As every old-time reader of Clinical Medicine knows, we have great faith in calcium sulphide. While it is not an infallible remedy, and fails at times, as other "sure cures" sometimes do, it certainly proves very effective in a large class of cases which are not touched by the usual remedies. In measles, scarlet fever, and the other acute contagious diseases it has become one of the remedies of choice with hundreds of good physicians.

Calcium sulphide should not, however, be used as a substitute for vaccination or to replace antitoxin in diphtheria. These specific remedies should always be employed—when indicated—the one as our best prophylactic; the other as a remedy that practically always cures, provided it is given early enough in the course of the disease. But there is no good reason why every person suffering from smallpox should not also be saturated with the sulphide; nor why the same substance should not be given as a routine remedy to all diphtheritics. Personally, we believe this good practice.

The suggestion that calcium sulphide will prevent carsickness and seasickness is a novel one. While we have greatest faith in atropine (or hyoscyamine) and strychnine in the severe cases and in cactoid in the lighter ones (as advocated by Doctor S. Austin Davis) we hope that some of "those who go down to the sea in ships" will give the calcium-sulphide method a trial this summer and will then report their results.—Ed.]

"SPINA BIFIDA" AND INFANTILE "COLIC": TWO CASES IN WHICH PERSISTENCE WON OUT

We all often hear it said that the youth had better stand back and let those that are older do the talking, so that he—the younger—may learn. That is something grand, sure—just sit around and absorb all you can, and never give out anything yourself. Now, as one of your youngsters, I enjoy this sponge-business very much, to be sure (?); however, today I feel constrained to write about two cases that present more than just a report of a diagnosis and curative treatment (which would be of very little value, indeed), but which teach a lesson about the great need of care in arriving at a correct diagnosis.

Case 1.—In a baby born of a healthy mother, and in normal labor, a tumor about as large as a hen's egg had formed at the junction of the lumbar and the sacral vertebras, and appeared to be exactly in the center line of the back over the spinal column. The doctor in charge was not sure as to whether this growth was there at birth; it was observed, though, a short time afterward, and it gradually increased in size. After due deliberation it was diagnosed as spina bifida, and the mother was told that when it ruptured the baby would die. At this juncture, another physician was called in consultation, and he verified the diagnosis. Since a fatal issue was now looked upon as inevitable, nothing was done for the child except to ease the pain, which seemed to grow worse.

One night, about three weeks after its birth, an attendant started to dress the child, when he noticed a small break in the swelling and a whitish discharge issuing from it. He put the child down, expecting it to die immediately, according to prediction. As the babe lay there it moved, whereupon the sac ruptured and bloody pus flowed from it freely. While the attendant watched, expecting death every moment, a miraculous change took place. Instead of expiring, the child dropped into a profound sleep, from which it could not be aroused for several hours—the best sleep it had enjoyed ever since it was born. They did not call the physician, because they thought it of no use; but when in the morning they found the child remarkably improved they did send for him.

The doctor was nonplussed, of course, to see the child doing so well, and, after further examination, he was honest enough to admit that he had been mistaken, the swelling being an abscess only. He applied a poultice and instructed the attendants to keep this up until the sore healed. The opening closed, but it burrowed to another spot; it ruptured there, closed, and burrowed again; and so it went on, making many openings to this

one abscess, until, at last, the physician gave up. Then I was called.

The history, as I elicited it, I have given. Making a close examination, I found a small defect in the sacral region, but no marked furrow. The child exhibited no signs of paralysis, nor had there been any. What the parents desired of me was, that "the back be cured." The back, from the twelfth rib down to the sacrum, was covered with small openings, where the pus had ruptured through. I suggested laying open these furrows, but met with unyielding refusal.

By way of alternative, I then directed that the back be thoroughly cleansed, three times a day, with green soap, followed by moistening with hydrogen-dioxide solution of full strength, after which a weak ointment of scarlet-red (medicinal) was to be applied. Before all, the poulticing was ordered stopped. In just six days the baby's back was healed up—much to my surprise, you may guess. However, there did remain a jaundice that resisted all my efforts, but disappeared of itself by the time the baby was four months old. After that, it has been a healthy tot.

Surely, this must have been a blood clot, caused by some injury at birth and which broke down. How about it?

The second case is of a somewhat different kind.

Case 2.—Also a baby, and born of healthy parents and in normal labor; weighing 10 pounds at birth, and normal in every respect. At the end of a week this girl baby was attacked by a severe colic that required opiates to relieve. The attending physician gave treatment for a week when, getting no result, he put the child on anodyne pills, telling the mother that it was suffering from a stricture of the bowels and would die at or before it was six weeks old. He also said that it was a "blue" baby.

When six weeks old, the little one had become so bad that it cried continually day and night and could not rest at all unless it lay over its mother's right arm with its body almost bent double in a lateral direction. It was losing weight fast, getting down to only 6 pounds (I think it was). Then a relative, when in town one day, approached me and begged me to go out and see that sick girl. He also assured me that the older doctor had abandoned it to die.

I went, and found the child suffering from malnutrition, seeming to be nothing but skin and bones. Its head was square and its face very small for the size of its head; its abdomen was rigid and tender; the pulse was very fast, although regular; no fever was present. I could detect no tumor by rectal or abdominal examination. The stools showed massive milk curds. The bowels were constipated, and injections brought only a little fecal matter. However, the child never had vomited, except for small amounts, sometimes, just after nursing. I did not formulate a diagnosis, but suggested a possible intussusception, or else that it might be a case of aggravated intestinal indigestion.

On general principles, I inserted a soft-rubber catheter very high up the colon and gave a copious enema. This gave some relief. Then I ordered to be given calomel, 1-10 grain every half hour for ten doses, followed by senna. Further I prescribed a senna mixture, dose three times a day; besides galactenzyme, one tablet every two hours. The use of infant anodyne (Waugh) was recommended when relief from pain became necessary.

Under this treatment, the child improved slowly, gaining one-half pound a week for three weeks. Then it had a week of hard colic again, when I advised daily enemas, and changed the senna mixture to a cascara preparation; and the child now is almost six months old and is in fine health. However, it still has occasional colic attacks.

I do not approve of giving up a patient until life is gone. To do everything possible to save the sick is our duty, as physicians.

I like the alkaloids, and use quite a few of these remedies. Calcidin is an old standby.

Hunter, Okla. W. B. NEWELL.

[The doctor concludes his letter with this remark: "Perhaps I'll write again providing this gets into your excellent journal." Now we know he'll write again!

These two cases teach several lessons. First, be sure of your diagnosis before venturing a prognosis. Second, be thorough. Third, use common sense. Fourth, in case of doubt clean out the intestinal canal and keep it clean. Draw as many more conclusions as you like! By the way, I wish the doctor would tell us whether or not there was a rise of temperature in that first case. If present, that should have given the key to the trouble.—ED.]

A SIMPLE APPARATUS FOR INTRAVENOUS MEDICATION

The apparatus which I have designed for intravenous medication has been of great value in my work, and the hope that it may be

Infusion apparatus recommended by Doctor Moore

of assistance to the profession leads me to describe it in detail.

This apparatus consists of a specially designed 12-ounce flask of heavy glass, which is ground at the top, is low, and has a broad, firm base. The flask is closed with a German-silver screw-cap (with rubber washer), through the center of which is passed a two-way German-silver tube, silver-soldered. To each of these tubes is attached about two feet of stout flexible rubber tubing. The long, or "flow," tube extends to the bottom of the flask. The short, or "air," tube terminates at the neck and leads to an automizer-bulb, to which it is joined with a glass connector. This connector may be packed with sterile cotton, for the purpose of filtering the air as it passes through. Air is pumped into the flask by means of the bulb, thus forcing the solution out of the flask by way of the flow-tube.

The flow may be turned on or off at will by means of a cutoff attached to the rubber tubing. With a needle, preferably of platinum, and two glass "signal tubes," ground to fit a needle of the Luer type, the apparatus is complete. Two signal tubes are absolutely necessary for perfect results. One is attached to the apparatus, while the other is used merely as an aid in handling the needle.

To sterilize the outfit, wash it thoroughly with a 5-percent solution of carbolic acid and rinse with sterile water; or boil it with the tubes off, taking care not to subject the glass to sudedn changes of temperature. The bulbs must not be boiled.

Pour the solution into the bottle and screw the cap down tight. Place the patient in a recumbent position, with the arm for injecting at right angles to the body and resting comfortably upon a table. The operator should be seated, facing the arm with his left to the patient.

Sterilize the arm at the point of injection, by washing with soap and water, followed by alcohol; or by means of the iodine skin sterilization. Bandage the arm just above the elbow. Opening and closing the hand rapidly will help to raise the vein, which should be well distended.

Attach one glass signal tube firmly to the flow-tube and hold it above the bottle. Apply pressure with the bulb until the air has been expelled from the flow and the signal tubes. Place a sterile finger over the opening to the signal tube, fill the flask tight with air, then close the cutoff.

The needle may now be inserted. Attach the needle to the second glass tube, using a twist to the right, which tightens it. Care must be taken to give only a slight twist, so it can easily be removed. Raise the skin with thumb and fingers and pass the needle well through it, over and parallel to the vein. Release the skin to normal position, when the needle can be worked gently into the vein, using but little pressure, in order to avoid penetrating the opposite wall.

When the blood rushes back into the glass tube, showing that the needle is in the vein, remove the bandage and very carefully disconnect the signal tube from the needle and attach the one connected to the apparatus and release the cutoff. The bulb now is compressed from time to time, to keep the flow continuous and steady.

To complete the injection of 8 ounces requires from five to fifteen minutes, according to the size of the needle and the pressure used. In the majority of cases, the 22-gauge

needle is the proper size, but in children or when the veins are small or deep-seated the 24-gauge is better. Both sizes should be included in the outfit.

The solution may be injected to the last drop if desired; but, to avoid injecting air into the vein, care should be taken to disconnect the needle before the glass tube is empty.

Care should be exercised in bandaging the arm, so that it can be instantly released, to avoid clotting in the needle.

A welt raised at the needle point will indicate that it has not entered the vein or that it has passed through both walls—or clear through the vessel.

Avoid needles with a long point. Cut them off, if necessary; and be sure that the needle is open. Never turn on the solution until you see the blood in the signal-tube. Never attempt to insert the needle into the vein at the side—always from directly above.

In giving salvarsan or neo-salvarsan, salt solution before or after making the injection is unnecessary with this apparatus.

It is a very simple matter to insert a needle into the vein. There is virtually no pain, and neither the vein nor the surrounding tissues are injured. I have utilized this apparatus many times in the intravenous medication with salvarsan and neo-salvarsan, without a single time finding it necessary to resort to venesection.

This apparatus[1] ought to meet all requirements both of the specialist and the general practitioner. It is small and compact, accurate and reliable in its operation, permits the use of a small hypodermic needle, and eliminates the necessity of venesection.

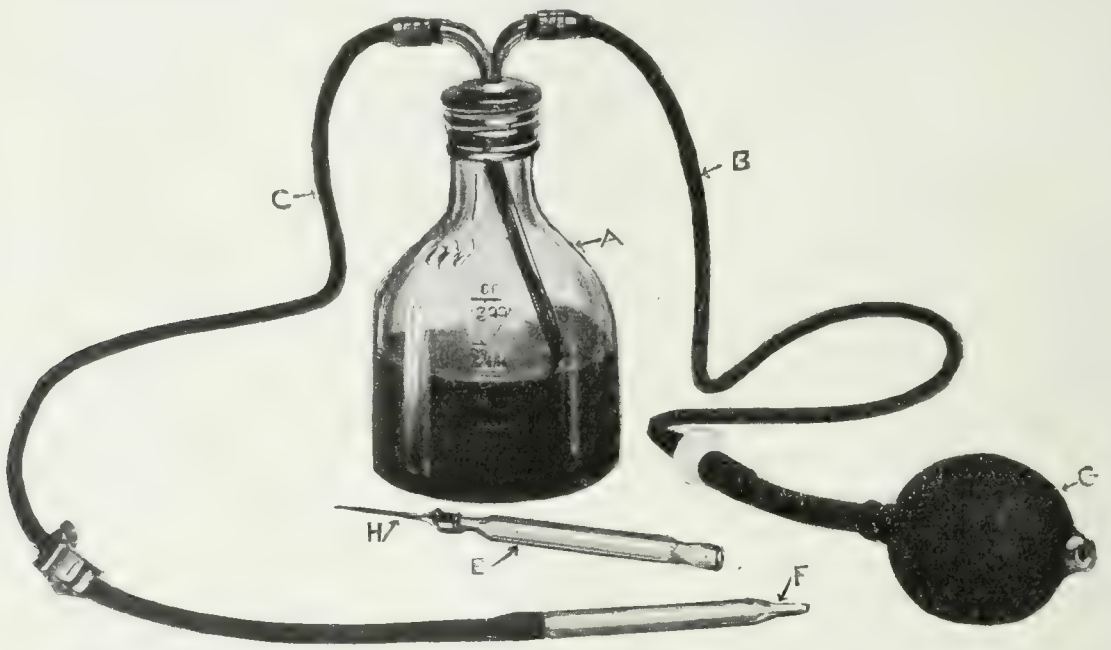
HARVEY A. MOORE.

Indianapolis, Ind.

[1]The apparatus is manufactured by The Underwood Chemical Company, Indianapolis, Indiana.

INTRAVENOUS MEDICATION

The dangers associated with intravenous medication have been very much exaggerated. Almost the first question asked me in every instance is, "Doctor, do you not get violent reactions from your treatment?" Most assuredly I do not. There is not as much unpleasantness as in giving a hypodermic injection.



Infusion apparatus. A, flask; B, air tube; C, flow tube; D, air filter; E, glass signal tube with ground tip; F, connection tube with ground tip; G, air bulb; H, hypodermic needle, 22 gauge (Yale Luer).

I have now been employing the intravenous method for two years and have given hundreds of injections, with only two unpleasant reactions; and I now feel positive that these resulted from an overdose of nuclein.

I make up my own solutions in the office, using extreme precautions to maintain perfect cleanliness, using for my vehicle *freshly boiled* distilled water.

My stock solution I make in pint lots, and the one used for rheumatism contains 2 grains of salicylate of sodium to the dose. Cacodylate of sodium, 2 to 8 grains, is added to solution No. 1 when for primary syphilis, also for muscular forms of roseola. Plaques on mucous membranes and condylomata disappear very quickly, and I have had primary lesions disappear after one treatment. All conditions where arsenic is indicated call for the addition of the cacodylate to the solution.

Mercury in the form of bichloride is used in conditions calling for mercury. Nuclein, to increase nutrition, helps me a great deal; but it should be given only in small doses, say, from 1-3 to 1-2 ampule to 5 Cc. of the solution.

The standard solution must be made up under thorough aseptic precautions, to maintain perfect sterility, and must be kept well corked and away from light. This solution contains per 5 Cc.:

Calcium creosote	grs. 10
Sol. iron phosphate	grs. 2 1-2
Potassium phosphate	gr. 1-6
Magnesium glycerophosphate	gr. 1-5
Sodium chloride	gr. 1-5

This completed solution should be a beautifully clear, blood-red, with no sediment. It will keep for weeks.

I am using this formula for anemias, neurasthenia, bronchitis, asthma, early tuberculosis, skin diseases, rheumatism, syphilitic infection. In all conditions where there is a deficient alkalinity of the blood, it rapidly increases the number of red blood-corpuscles and decreases the white. The cell-salts, such as those of sodium, potassium, calcium, iron, silicium, magnesium, are essential elements in the animal economy.

A lack of any of these salts means a departure from the normal and a disturbance of the vibratory stimulus to the perfect body-chemistry. The solubility of the blood depends upon potassium. Calcium affects its defensibility, and also helps to hold it in solution. It forms the wall of the cell, and helps to hold other salts in solution. Without this salt in the proper proportion, the cell cannot maintain its integrity, the viscidity of the blood is reduced, and the colloidal membranes are weakened, thus allowing albumin to pass through the membranes. Hence, my grounds for using it in albuminuria, and also in eczemas and catarrhal conditions.

One great essential in organic chemistry is oxygen, without which cells soon break down. Iron is the necessary element to hold oxygen in solution in the blood, so we have the indication for soluble iron intravenously.

Biochemistry shows us the cause of disease in the disturbed relation of the cell-salts, and intravenous medication furnishes us the most direct way of restoring the equilibrium, which means health.

The subject is a new and interesting one. One becomes enthusiastic as he grows more familiar with it. To give an anemic patient a treatment and in a week find the red blood-corpuscles have increased 1,000,000 to the field and have resumed a normal appearance, or to have a neurasthenic come back in four days and say the effect was simply wonderful, makes one enthusiastic.

Then, to know that you can place the chemical substances directly where they are needed without depending on absorption and assimilation, to put them into the circulation, and the further fact that the cells are rapidly distributed through the body, and that fact proven by the patient tasting the creosote in less than fifteen seconds after you start the injection; and, also, that the garlicky odor of the arsenical compound can be detected on the breath in two minutes, showing that the elimination takes place through the lungs and begins almost at once—all these conditions make it reasonable to believe that the beneficial results should begin immediately.

I have written at random on a subject that furnishes too much material for anything less than an exhaustive article. If you will once try it, my brothers, you, too, will grow enthusiastic.

I am just beginning the use of iodine intravenously, but as yet have nothing to say.

I use a Leur 10-Cc. all-glass syringe with a No. 27 platinum needle, boiling always before using and cleaning thoroughly immediately after. I give the treatments from two to seven days apart, and patients are as pleased with the method and results as I am myself.

W. N. Fowler.

Kalamazoo, Mich.

[This is an interesting communication upon an important subject, which we hope may be thoroughly discussed in these pages.— Ed.]

CARBON-DIOXIDE ICE IN EPITHELIOMA, OR SKIN-CANCER

Of all the different modes of treatment that have been recommended and tried in those obstinate and long-standing facial blemishes known as skin-cancer, there is none that will give such positive results as the application of carbon-dioxide ice.

In the early stages of this affection, two or three applications usually will suffice. It will require deep pressure with the icy stick for about thirty to sixty seconds, to be repeated once in three weeks. Hardly a mark will be left of the former epithelioma.

In the more advanced cases, those in which the destruction of tissue is quite pronounced and of some depth, it will take a longer time to accomplish the same result. As said, the

carbon-dioxide stick should be applied to the lesion from thirty to sixty seconds, and with a firm, deep pressure. Should a blister form as a consequence, it is advisable to leave the same alone and allow it to dry up. Should any pain follow the application, then cloths wrung out of hot water and applied frequently will relieve it.

The lesions, after being treated, must not be covered; if they occur on a part of the body covered with clothing, a vaccine-shield or similar protector should be placed over it and secured with adhesive strips, so that the clothing will not come in contact with the sore. If any discharge is caused by the treatment, gently mopping it away with absorbent cotton will suffice.

In treating lupus in this manner, the results have been found to be equally good.

Senile keratosis of the skin in the aged usually is a forerunner of an epithelioma, so that the destruction of these facial blemishes (one or two treatments with medium pressure for fifteen seconds three weeks apart) will be found an excellent prophylactic of a more serious nature later on. But the constitutional remedy must not be lost sight of in treating any of these skin lesions.

Berberis aquifolium is one of the best remedies where the skin is dry, inelastic, and scaly, and 15 drops of the "specific medicine" four times a day will do wonders. Rumex, in 10- to 30-drop doses four times a day, is indicated where there is indolent ulceration, anemia, and little disposition to respond to treatment. It will surprise everyone not familiar with it by its tonic effect upon the system.

Phytolacca in 10-drop doses four times a day will be called for when the mucous membranes are pallid and there is a burning pain and swelling of the glands.

Echinacea will be indicated where the tongue has a dark coating and the mucous membrane is inclined to redness. As a blood purifier, it is unexcelled. It will relieve the pain of cancer of the throat better than any opiate.

Hydrocotyle asiatica in 10-drop doses of the 1*x* dilution every three hours, is an excellent remedy in lupus. It will be indicated when the skin is thick and scaly, and there is profuse perspiration.

When the vital forces are on the wane and the patient complains of exhaustion and weakness, strychnine sulphate in 1-30-grain doses four times a day will be a very necessary remedy throughout the entire course of treatment. The bowels must carefully be looked after. The epsom-salt bath two or three times a week also will help to comfort the patient. One pound of this salt to the bath will suffice.

A. S. Tuchler.

San Francisco, Calif.

A LETTER FROM AN OLD DOCTOR

"Business unity in the medical ranks" hits the nail squarely on the head. I am past the three-score mark, in full vigorous health; was brought up in the practice of medicine; am a graduate of the medical department of the Western Reserve University, 1876; served as assistant house-physician in Lakeside Hospital, A. A. Surgeon, in charge U. S. Marine Hospital Station; have taken post-graduate courses in New York and in Chicago; have written several articles for medical journals; am eligible to membership in the A. M. A.; enjoy most friendly and professional relations with best physicians of this city and personally am acquainted with such men as Drs. G. F. Lydston and J. B. Murphy of your city. I have a son and daughter in Chicago, the daughter a graduate of Mercy Hospital, supervising nurse in the health department, and employed in the engineering department of your city. I should be glad to locate in a suburb of Chicago, to continue in the practice of medicine, so as to be with our children, but I know that I probably could not pass the state examination, and, therefore, should not be allowed to practice medicine in Illinois.

How inconsistent and unjust and how contrary to the United States Constitution that one who has complied with all the regulations qualifying him to practice medicine in Ohio, eligible to county, state, and national medical societies, can not, after long years of honorable, professional work, engage in his profession in any other part of the United States or wherever the stars and stripes float without being obliged to pass an examination that should be required only of recent graduates, fresh from college-theories and familiar with their studies, much of which is unpractical in actual practice. And all this injustice and inconsistency is brought about and backed up by greed and narrow jealousies of those who pose as leaders of the medical profession, and as progressives in medicine and ethics.

In my opinion, it should be one of the first and most important duties of the American Medical Association, a representative body of all the states, to correct these inconsistent, unjust conditions; which is more important

than the efforts of some of its leading members—such as, for instance, organizing the American College of Surgeons, that artificially divides the profession into classes and rends it asunder, rather than unifying it.

FRANK H. TODD.

Cleveland, Ohio.

A NEW SANATORIUM

Dr. Charles A. Shepard writes us that he has opened a modern, thoroughly equipped sanatorium for the treatment of tuberculosis, to be known as the El Reposo Sanatorium, at Sierra Madre, California. This will be of interest to Doctor Shepard's many friends who will wish him well in this new venture.

BUBONIC-PLAGUE TRANSMISSION

A touching teaching incident happened in India not long ago. Helen, the little daughter of the United States consul, had a little pet, Don, an Italian grayhound. Little Helen was just emerging from babyhood into girlhood. Don, the dog, was just leaving his puppyhood. The twain made a lively pair. Don was young and his cuticle tender, and the fleas loved him dearly. One of his little mistress' daily duties, doubly disliked by both of them, was, to wash her pet free of fleas.

One day, when she had just about finished this ablutory task, Don, with many a squirm, broke away from her, dashed across the court and caught a rat he had espied and proceeded to shake and chew the rodent in a manner fit for an old ratter. When the dog had finished the job and his mistress was able to catch him, she found him covered again with fleas from the rat he had just killed. So, she proceeded to wash him once more, when some of the fleas, in order to escape the wet bath, jumped on her and promptly bit her. When she related the occurrence to her mother, the latter said, "Why, this is the first rat Don ever caught. How in the world did he do it?" "Well," came the answer, "it must have been a very old rat, for it could hardly run."

As a matter of fact, it was a rat hunting a quiet place to die, being sick with the bubonic plague, and the little girl was one of that frightful 80-percent contingent that make up the mortality rate from bubonic plague. And this is one of the reasons why we see India placarded, telling how the rats carry the plague, and why, when a rat is found dead, not from violence, the health-officer is notified and the pathologist holds a postmortem, to see whether the cause of death was bubonic plague.

E. S. MCKEE.

Cincinnati, Ohio.

TREATMENT OF HAY FEVER

I should like to outline a course of treatment for hay fever that has been giving me excellent results. The patient is allowed no local home treatment whatever (thus removing possibility of cocaine habit). At the office, each day, the following:

Contract the tissues by applications of 2 percent cocaine solution, applied on pledgets of cotton; wash out with an alkaline antiseptic; and then spray on iodinized oil one-half of 1 percent.

Put dark glasses on patient, and caution him against blowing his nose at least an hour after this treatment. Let him snuff back any secretions or excess of the oil, and expectorate. The glasses are to be worn daily.

Internally, give iodine in some from which will not easily upset the stomach. Give at bedtime a pill consisting of bile extract, blue mass, aloin, and podophyllin, 1-6 grain of each. Every morning, before eating, a saline laxative.

Inject full doses of a multiple-infection bacterin, containing as many strains and as many varieties of organisms as possible, about 225,000,000 being the initial dosage, running it up to a billion. The vaccine I use contains: bacillus influenzæ, pneumococcus, micrococcus catarrhalis, staphylo- and streptococci, and bacillus diphtheriæ.

I believe that hay fever is due to a peculiar sensitiveness of the nasal mucous membrane to these various organisms, with pollen, dust, or gases as the exciting causes; dust and pollen possibly carrying in bacteria, which develop in the presence of moisture. The absence of fever, and the chronicity of the disease are due to a very low-grade infection, and to the profound depression of the reactionary power of the patient's system.

During the resting stage of the trouble, the bowel cleansing should continue, with the addition of the three arsenates, and phosphorus. Order a bland diet, containing little meat and plenty of salads and fruits.

R. H. CHILTON.

New Orleans, La.

[There are some excellent ideas in this paper. We wish particularly to second the suggestion that bacterins be tried in these

cases, although we believe best results are obtainable with autogenous bacterins. The latter are easily made and relatively cheap—and if the cultures are carefully made they should have a certain specific action. There is danger in the use of cocaine in hay fever, so that we prefer to get along without it when we can. Doctor Candler has devised a special treatment for the disease in which none of this narcotic is used. We shall be glad to supply details concerning it to any physician who is interested.—ED.]

A LETTER FROM A "LIFER"

In the March number of CLINICAL MEDICINE there was an editorial telling something about two remarkable men, Jack Apple and Louis Eytinge. The first of these lives in Savannah, Georgia. Some years ago, in diving into shallow water, but two days before his graduation from the Georgia Institute of Technology, he broke his neck, and since that time has been a helpless paralytic. We almost said "hopeless"—but Jack has not been without hope. Hope has kept him alive and kept him happy and useful—and today he is making more money and more real joy than most of the readers of this journal. Turn back to the story and learn how.

The other man was Louis Victor Eytinge, who is a life prisoner, for murder, in the Arizona State prison. He went in a consumptive, but he made it his first business to get well—and then he went into business and made a success of it. Turn back, again, and read the whole story. I would tell it all over again if I had space and time—I am shy of both today—for you should know something about the man and what he has done before reading the letter which follows.

This is a personal letter, and I do not feel that I should print it all. But there are parts of it which I want to divide with the readers of CLINICAL MEDICINE, because I believé it will do them (us) good. It follows:

That copy you sent me of your March issue was the first I'd seen—but it demonstrated one thing, that there is one other who possesses the power to persuade because of ability to write simply, naturally and heartily—that other is the man who wrote the March editorial—yourself!

Frankly, Doctor, I've been discussed in quite a number of magazines, from *Collier's* down to lurid little sheets, from *Chicago Tribune* down to socialistic sheets, and although I've read these, and know what *The American* and *The Outlook* are shortly to say, I've appreciated more the few columns from your pen than anything that has yet been said. All because of the way in which you said things.

I'm rather curious as to the common friend from whom you secured your information. He's wrong in two particulars—the weight went up to 190—and I've given up the hair work and even my private clientele in lettersmithing and devote myself exclusively to the magazine and book articles that have been promised publishers. To be sure this is not so remunerative as single-page letters that I charged $15 for, but it gives me a greater radius of influence, develops a greater circle of interested folks who will be led to think of this great economic problem of the prisoner, because of my performances.

I thank you for your good wishes as to a future—for my liberty. In all frankness, I rather think I'm justly entitled to the sympathy and assistance of the medical profession, for mine is the only case of *poisoning* recorded, where a verdict was found without either a chemical analysis of the body, or a confession of guilt. It is a matter of record that over my public plea for such an analysis of the organs, the body was shipped out of the state.

It is a matter of record that the "expert for the State" admitted that he made no close examination of the cadaver, simply because it was an unpleasant task—that he could not say the dead man died either natural or unnatural death. This doctor is deservedly one of the leaders of his profession in the State. I make no protest, nor have any criticism of his stand. He was simply engaged as one of the State's experts. The other alleged expert for the State had no knowledge whatever of toxicology and had been refused permission to practice in California.

It is a matter of record, I think, that my alleged victim was asthmatic, tubercular and with complicated cardiac troubles. The evidence in the case consists in the fact that I bought chloroform and chloral hydrate, the one for his heart troubles and the latter to make easy his rest and alleviate his asthmatic attacks. Both were bought at his suggestion and in his presence—by me, because I was also paying the room rent and board bills, but I was befriending my alleged victim.

It is also true that I took him for a ride into the country—that I came back alone—that I fled—but it is also true that I left the country because of two $500 drafts and some small check that I had forged during the week previous. I'm the first to admit that some circumstances against me are mighty strong—also the first to claim that my conviction was brought about by an inflamed prejudice due to my past criminal conduct, sensationalism on the part of some papers, lack of funds with which to make adequate defense, and a medieval jury system that does not provide for a jury of superior intelligence to handle a case that involves scientific testimony, etc.

Frankly, I'd like to write some few paragraphs to go with the coming article on Jack Apple, but I'm so far behind in my own work that it is hard to spare the moments for this little chat. I'd like to tell some little of my personal views, but I believe in myself, in the work I am doing and the greater possibilities that lie ahead. Man alive, what especial credit is due a chap because he is cheery and enjoys his work? What else is there for one to do? I'm an admitted crank on the subject of *human efficiency*—and I view everything from the angles of *why*, *what* and *how*? *Why* should one be downcast, downhearted? *What* is there to be gained by pessimism? *How* shall one win any reward?

To my mind the man who does not love his work is out of his place. But one worker is able to do

efficient labor, the man who sings at his work—who makes of it almost play. I look forward in all frankness, to the reward in the thing I am to do. It may be profit, it may be repute, it may be soul satisfaction—but there is the reward always. I've found out for myself that moody moping makes for mental misery. Pulling the long face doesn't pull for a long life, no more than pulling the long bow pulls in the long green. Concentration—the singleness of purpose—helps a lot. I remember

Louis Victor Eytinge

when a boy following behind a farmer's plow for angleworms to serve as fish-bait. And I've learned a lesson from the old farmer's homely wisdom, when he said, "the worm that wiggles the waggliest never works its way into deep dirt."

I have a part of master egotism in my makeup and find it an earnest help. I've found out that the highest vision is the farest sighted—found out that the highest idealism for living is also the most profitable for business—that the making of goals today is but the tuning up for the winning of games tomorrow. I know not what tomorrow brings, but I do not care to see "unrolled the scroll of Fate"—but whatever comes will find me ready to do my darnedest with the material it offers.

I believe, in all sincerity, that the things I've achieved are but little things to the parts I must yet play before my turn upon our Stage is ended. I can look back and see myself a lunger with my daily hemorrhages—then a beginner in business, then a mail salesman; a little while and I've found that I can do still more as a writer on criminology—that if I concentrate I can lift myself into leadership in business correspondence.

Today I am telling big business men how to make their letters more productive of both profit and good will—tomorrow, perhaps, I may be telling the world how to reduce the crime cost of our country from five or six *billions* to one third of that stupendous total—tomorrow I may be playing a master-role and all my aims of today are in line of preparation. There is no especial credit coming to me, even if I succeed beyond my present hopes, for what in the deuce can a chap do, if he wants to make a *man* of himself, other than to *study*, *strive*, and—*smile?*

Earnestly,

LOUIS VICTOR EYTINGE.

Florence, Arizona.

CONCERNING BAKING POWDERS

It is strange what unaccountable notions will sometimes obsess the popular mind, without the slightest ground for their existence, and remain for years and years, defying all attempts at dislodgment and despite all reasonable arguments and all experimental disproof. The writer remembers for example in the days of his youth that for several years, tomatoes were tabooed as a food, under the popular impression (where or how it started, heaven only knows) that they induce cancer; a prejudice which died hard. And everyone can cite some similar delusion, especially in the matter of food stuffs, that has held the public in its foolish spell for long periods of time.

These obsessions, in themselves, are, of course, exceedingly ridiculous and even humorous, but unfortunately they often have a serious side in that they are apt to hinder progress and hamper trade and may even injure very gravely some special business. Such an obsession is the one which for almost half a century has regarded the presence of alum in a baking powder as being injurious to health, and has looked askance on all baking powders that contained alum. Nobody ever troubled to inquire whether it was really injurious, or why it should be injurious. There was simply a vague, unreasoning notion abroad that it was so; and the more it was acted upon the more it spread, until it actually became necessary to appoint a commission to investigate the matter and to make a report which could be circulated, with the weight of its authority, for the purpose of correcting the error.

The report of the Remsen Board has now, once and for all, put an end to this foolish

alum obsession. It declares, not merely upon its own say-so, but upon conscientious experimentation made on human beings by men of the highest scientific attainment, that alum is neither injurious nor unwholesome as an ingredient of baking powder; and should set at rest the minds of anxious housewives, who have for years been intimidated into paying exorbitant prices for baking powders free from alum.

Sometimes these baseless prejudices in the public minds against this or that form of food stuff are deliberately "worked up" by some trade concern which has an interest in one article being widely used, or in another being universally banned. Thus, in this same baking powder matter there has been a very assiduous propaganda on the part of the baking powder trust to create a feeling against the use of egg albumen in the manufacture of baking powder. We say a feeling advisedly, for impartial scientific investigation fails to disclose that there is anything at all involved in the dispute beyond the sheer trade end of it. So far as the question of wholesomeness is concerned, it is a matter of indifference whether baking powder contains egg albumen or not. And the quantity contained by those baking powders which employ it is so small that it certainly can have no effect one way or the other upon the digestion of the consumer. The only issue, so far as we are able to discover, is the part played by the egg albumen in the standardization of the article.

The principal gauge of the efficiency of a baking powder is its gas-producing capacity; and the most available means of testing this capacity is what is known as the "water glass test," that is, a rough estimation of the amount of gas evolved by the powder, upon the addition of water, by the bubbles which emanate from it and foam up in the glass. It has been advanced against the use of egg albumen that the value of this test is thereby vitiated because the egg albumen itself gives rise to gas bubbles and thus confuses the accuracy of the test. We do not believe that this objection can be successfully maintained. Scientific reasoning would not lead us to suppose that egg albumen had any gas-producing properties and experiments have confirmed this scientific reasoning. The argument seems to be all in favor of the egg albumen powder, for it is conceded by every one that the presence of the white of eggs in baking powder furnishes a viscous quality which imprisons the gas instantly thus, affording a reliable means of testing the available gas strength of such powder. On the other hand, baking powder which has no egg albumen may very easily fail to show its full gas strength since the gas bubbles, lacking the influence of the albumen, break rapidly as they come in contact with air. The statement that the presence of egg albumen makes the baking powder appear stronger than it really is, seems, therefore, to be untrue. On the contrary, the presence of the egg albumen enables anyone to determine the exact amount of available leavening gas produced by the baking powder, and consequently acts as a guarantee to every dealer and user of the goods, ensuring that they shall always secure fresh, dependable baking powder.

In other words, the presence of egg albumen in a baking powder has nothing to do with gas *production*, but exercises considerable influence upon gas *retention*, which is manifestly just as important to the efficiency of the powder as gas production, to say nothing of its role, as just intimated, in the estimation of that efficiency. And in this respect the egg-albumen-containing powder clearly has the best of the argument.

We have already said that the use of the white of an egg in the manufacture of baking powder cannot possibly have any ill effect upon its food value. Hence the claim that the use of egg albumen constitutes an adulteration is absurd. In fact, the Federal Food and Drug Board of Inspection has already rendered a decision that the use of the white of egg in baking powder is not an adulteration within the meaning of the law; and this ruling is in accordance with all the canons, both of science and of common sense.

To such a state of acuteness has this trade fight attained that we understand bills have been introduced into Congress on both sides, one demanding that white of egg shall always constitute an ingredient of baking powder, the other requiring that it shall never be so. Personally, we are not very much impressed with the necessity of dealing with the question by means of legislation at all, but as between the two proposed enactments we believe that a statute requiring the use of egg albumen would be of benefit to the public, while we are equally sure that legislation against the use of egg albumen would be exceedingly disastrous from the public standpoint. There is no better or more commendable aim in public legislation than the improvement of food standards. Trade wars usually impede, if they do not actually discredit, this kind of legislation, and they are always greatly to be deprecated. It is most unfortunate that

several food commissioners of the various states have allowed themselves to be hoodwinked by the specious claim and charges of the trust and to be drawn into this fight. Already some of them have shown their broadmindedness by rescinding their ruling and refusing to take any further part in the matter. As stated above, the medical man, and the scientist everywhere, is not concerned with the pros and cons of a trade fight. He is concerned only with the welfare of the public as represented in the matter of food stuffs. From such a standpoint there would seem to be but two inevitable conclusions on this question of egg albumen in baking powder: First, it is in no sense an adulteration and in the small quantities in which it is used can have but little appreciable effect upon the food value of the baking powder. Second, it seems to be generally agreed that the presence of egg albumen serves to imprison the gas and thus to make possible a correct estimate of the gas-producing strength of the powder. So that, both negatively and positively, the advantage rests with the egg-albumen products.

T. G. Atkinson.

Chicago, Ill.

SEROLOGIC TESTS

The diagnosis of syphilis, tuberculosis, gonorrhea, and glanders, by means of the complement-fixation reaction, has added much to our ability to recognize these conditions.

These reactions, as well as the even more wonderful Abderhalden tests for malignant tumors, carcinoma or sarcoma, pregnancy, epilepsy, dementia præcox, and the like things, are far and away beyond the average laboratory-worker.

These tests upon specimens of blood-serum, spinal fluid or ascitic fluid, as the case may be, can be properly made only if the serum is properly collected.

Many of the samples that are sent to our laboratories (Abbott Laboratories) for these tests are unsatisfactory. These we do not attempt to examine, as such examinations usually are worthless.

In obtaining the serum for the Abderhalden tests, the following conditions must absolutely be complied with:

The serum must be as low as possible in diffusible substances that react with ninhydrin —this is attained by taking the blood in a fasting condition, that is, just before breakfast.

The serum must be absolutely free from blood-corpuscles and hemoglobin.

The serum must be collected aseptically and must be sterile.

To collect the serum, draw from the median basilic vein, under aseptic precautions, 10 to 15 Cc. of blood, with a sterile *dry* needle; place directly into a small sterile vial or Erlenmeyer flask. The blood is allowed to clot spontaneously at room temperature; do not put it in the icebox or incubator. The serum usually separates in sufficient amount in five or six hours.

Now withdraw the serum and place in a sterile vial—be sure you do not get any corpuscles in the serum.

The manner of collecting blood-serum for the complement-fixation test is the same, except that it is not necessary to obtain the same when the patient is in a fasting condition; this blood may be collected at any time.

J. Favil Biehn.

Chicago, Ill.

A GENEROUS OFFER: BE SURE TO READ THIS

We are very anxious indeed to stimulate our readers to take up the practice of eye refraction; and we are convinced, after a careful investigation, that the Ophthalmo-Axonometer, made by the Standard Optical Company, of Waupaca, Wisconsin, which we have mentioned more than once in our pages, and which is advertised in this number, offers the general practitioner just the means he requires for doing this work simply and easily.

We have therefore, for the benefit of our readers, made an arrangement with the Standard Optical Company by which they will furnish these instruments at a special club rate to fifty or more readers of Clinical Medicine, The list price is $58.50. Under this special arrangement they will be furnished at the very generous price of $40, which can be paid at the rate of $10 down and $5 a month thereafter.

If you wish to avail yourself of this opportunity send in your order at once TO US, and we will see that it is taken care of. Or if you wish further information about the instrument, write us and we will see that you receive attention. Remember, the offer depends upon a club of fifty or more—and you must be one of the fifty. Act promptly if you wish to get in on it. Address *The American Journal of Clinical Medicine*, Ravenswood Station, Chicago, Ill.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

I AM glad that my article last month has already brought some response. One admiring friend of the late Doctor Love sends me this quotation, which is the concentration of philosophy:

"Don't cry, don't mourn, don't sigh, don't kick; remember, laughter is the most contagious thing in the world. As a key to success, remember the world will laugh with the man who laughs, will sing with the man who sings; but, if you weep, you must weep alone. If you must tell your troubles, tell them to the policeman."

I hope that others will send me some of Doctor Love's sayings, as well as the sayings of any other good doctor.

I shall now continue the article on hysteria, which I began month before last.

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In hysteric hemiplegia or monoplegia, there is not the "mowing gait," tipped pelvis, and catching toe of organic disease. The paralyzed leg is dragged after the other or carefully pushed forward and the foot set down flat. "Steppage" is unknown in hysteria. Paralysis for certain acts or maneuvres and not for others executed by the same muscle is hysteric, as is astasia-abasia in which the power of the legs is good with the patient in the recumbent position, but not when he tries to stand or walk. Rhythmic spasm is almost without exception hysteric. In hysteric convulsions, the pupillary light-reflexes are not lost and the movements are purposive, and, hence, palpably due to volitional impulse, and they imitate more or less closely movements executed with a purpose; while in convulsions of organic disease and of epilepsy there is reflex iridoplegia, and the movements are incoordinate and often shock-like. In hysteric attacks, too, and immediately following them, there is a change in the ratio of the urinary phosphates, the ratio of the earthy to alkaline being as 1 to 1 instead of 1 to 3—the normal. Finally, the therapeutic test may quickly reveal the nature of the affection; to wit:

Mental treatment, suggestion, hypnotism or electricity may produce so sudden a change in the symptoms as to make the diagnosis ridiculously easy. A severe hysteric affection may occur in an individual who never has shown any other hysteric symptoms, such an affection remaining unchanged for years and be almost the sole sign of this omnivagrant disease. Further, fever, a rapid or subnormal pulse, retention or incontinence of urine, loss of the sexual power or desire, loss of pupillary reflexes to light, and ankleclonus, although as a rule indicating organic disease, may occur as symptoms of hysteria.

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The "mowing gait," "steppage," and the like are found in certain spastic hysterics. The heart in hysteria usually is distinguished, as Whittaker remarks, by its easy excitability. The increase of action shows itself first after some emotional excitement or after stimulation by coffee, tea, alcohol, and other drugs. It may amount to a genuine tachycardia, although the frequency rarely exceeds 100 to 130 beats a minute. Retardation is much more rare, although reduction in the frequency of the pulse has been observed in the socalled sleep-attacks. Real attacks of palpitation are rare; still, the patient may complain of a feeling of distress, even though the action of the heart is so feeble as to be imperceptible. The pulse is increased after the slightest effort or physical excitement, the mere thought of exertion sometimes being sufficient to excite it. In the rarer cases of retardation, the reduction of the cardiac energy may lead to syncope.

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Sleep-attacks in hysteria often simulate death. Hysteric angina is comparatively rare; however, it is much more frequent than real angina. The condition is recognized by the emotional disturbance that usually evokes an attack and exists during it as well as by the absence of organic disease. Patients affected by hysteric angina express great mental distress. They wring their hands,

throw themselves about and succeed in exciting and alarming everybody about them. False angina is distinguished by a different situation of the pains, which do not always begin in the neighborhood of the heart, but sometimes in the extremities or they wander about in irregular ways. The attack is associated with other evidences of hysteria, such as emotional manifestations, eructations, polyuria, and so on. Sometimes an attack may be produced by pressure upon a hysterogenic area.

Vasomotor disturbances are frequent in hysteria, alternating flushing and blanching of the face being very common. There may be attacks of sudden coldness of the hands and feet, which in turn shortly afterward may become burning hot. There often is a sensation of numbness in the fingers and toes. Discoloration of the hands, more especially of the fingers, has frequently been noticed. Sometimes the hands are white and the ends of the fingers and nails blue. In some rare cases, the joints only are blue, while the rest of the fingers are red, so that the appearance is that of blue rings with crimson borders. The spastic contractions may be so intense as to prevent the escape of blood after puncture, it even having been observed that cups withdraw less blood from hysteric than from healthy subjects. Landouzy records cases in which the stroke of the finger-nail or of a pencil would bring out a red line which sometimes would extend itself out to a broad red stripe. Occasionally there develops in the middle of the stripe a pale-red lash-like elevation, so that curious lines can be traced upon the skin in autographism. This condition has been observed in epilepsy; here, however, it not persisting so long. Hysteric autographism may last for years.

In this connection belongs also the condition of vicarious menstruation, with bleeding from the nose, mouth, ears, stomach, or other parts. Great difficulty in diagnosis often arises in this condition, as hemoptysis and hematemesis are especially frequent in young anemic women. The profession is more willing to accept a vicarious hemorrhage from the nose as epistaxis than as relief of surcharged congestions about the head. Studies of blood changes which occur in connection with menstruation, entirely independent of the refinement of the socalled Stevenson Wave, account for the escape of blood from dilated paretic vessels, in unsupported places. While most cases of hemorrhage from the lung are due to manifest or latent tuberculosis, there is no doubt that true hemoptysis results from suppressed menstruation.

In this connection, one is reminded of stigmatization, as Dr. Harriet C. B. Alexander has pointed out. Many of these cases are due, as Doctor Alexander and Doctor Coomes have shown, to suggestion. Facachon and Alexander were able by suggestion to raise vesicles like those of blisters on the skin; Jendrassik and Kraft-Ebing produced eschars, and Bouren, Burot, Ross, Mabille, and others induced hemorrhages. It is not so surprising, therefore, that it occurs in certain hysteric patients who have concentrated their minds continuously upon the wounds of Christ, as was the case with Louise Lateau.

Hysteric affection of the lungs themselves is much more infrequent, but nervous disturbances in the larynx are among the most common expressions of the disease. Paroxysms of sneezing have frequently been recorded. Socalled nervous cough is a great embarrassment in differential diagnosis. This cough usually is dry, unattended by expectoration, and has a peculiar bellowing character distinguished as a "sheep-cough." It is characterized by its excessive obstinacy. It often appears suddenly and as suddenly disappears under the influence of emotional excitement, the worst paroxysms being usually readily controlled for the time by diversion of the mind. Severity of the cough may eventually produce pain in the chest and even hemoptysis.

Certain hysteric persons learn to draw blood from the mouth (gums, etc.) sufficient to tinge the sputum. Whittaker reported the case of a hysteric patient who for one entire day expectorated a blue sputum; but when instruction was given, in the presence of the patient, to have the next fresh sputum examined chemically and microscopically, that put an end to the phenomenon.

Aphonia is one of the most common manifestations of hysteria, being usually in the form of adductor paralysis. The laryngoscope shows that the vocal cords are not approximated in phonation, though the glottis is closed in cough. The patients at times are unable to speak, but can still sing or express pain. Hysteric aphonia generally disappears, but many such persons remain aphonic for years. When the voice is suddenly restored by artificial means, as by electricity, faith-cures, miraculous interventions, or the

like, the cure as a rule is not permanent, but the condition returns when the patient is removed from the impression.

Thus, in a case reported by Lowerfeld, the patient's voice had been reduced to a whisper for years. She was induced to repeat the letters of the alphabet, at first in a low tone and then louder and louder, without attention having been directed to her voice. When the woman found that she could articulate the letters distinctly, she began to speak. She had been convinced that she was unable to speak and had made no effort to do so. The trial proved her ability without any reference to the will. Martins reported a case of hysteric aphonia in a servant in which diagnosis was established by the laryngoscope. The physician assured the patient that she would be able to utter a loud sound the moment he made pressure on the larynx. Thereupon, under pressure, the patient spoke with a loud distinct voice. Then, after repeated experiments of the same kind, the doctor told her that she would be able to speak as long as she held her hand on the larynx. This experiment also succeeded perfectly; but, as soon as she removed her hand away she was unable to speak. This condition lasted for weeks.

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The diagnosis of hysteria as the basis upon which symptoms are built, does not consist in the recognition of a disease, but rather in distinguishing in an individual whether this or that symptom is of hysteric origin or nature.

The most essential thing in excluding hysteria is, the recognition of the symptoms or organic disease or neurasthenia. Most organic diseases have symptoms which hysteria may imitate. Thus, hysteria, as Sokolousky has shown, very markedly simulates tuberculosis; but it cannot present the expectoration, the bacilli, and the physical signs of the disease. While the hysteria may imitate organic disease at the beginning, it can easily be eliminated in the future course of the malady. Hysteria may show at the start the symptoms of an organic heart disease, but the conditions are easily separated later. Certain symptoms belong more definitely to hysteria, such as the paroxysmal attacks, the emotional dreams, sensory hemianesthesia, certain hyperesthesias, the globus hystericus, and so forth. It must be remembered, however, that hysteria is a real disease of the brain-cortex, and that organic disorder may bring it on as a complication.

The mental types of the hysteric female are divided by Des Champs into three classes: cerebral, genital (or sexual), and neuropathic (sensory or motor). These types may be pure or intermixed.

The general characteristics are, an absolute want of equilibrium in sensibility and will-power. There exists a mobility of humor in direct relation with facial impressionability to external influence (external ideas of perceptions) or to internal states (intrinsic ideas). The nerves vibrate to all sentiments coming from within or without and are registered without proper relation. One fact chased by another is forgotten. Another produces a momentary hyperexcitation which takes the place of truth, whence it is that falsehood is instinctive, but the patient protests her good faith if accused of the same.

This lack of equilibrium leads to decided modification of the mental faculties. Intellectual activity is overexcited, but in diverse degrees and variable ways, according to the particular tendencies adopted. Absorbed by preoccupation or controlled by an idea, the subjects become indifferent to all else. Their ideas are abundant and they rapidly pass from the idea to the act. Their vivid imagination, coupled with a bright intelligence, gives them a seductive aspect, but their judgment is singularly limited, attenuated or false. They judge excellently from a nonpersonal standpoint. They are quick at discovering faults, even of their own relatives, but faults attributed to themselves are repudiated. Their memory is capricious. They forget their faults and their actions under impulse, albeit these may be consciously done.

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The cerebral type is led by the intelligence. Such a woman ignores what passes in the sensorium commune. She displays little or no coquetry; what there may be is the result of intention and but temporary. There is an ethical sense, frankness and nobility in her ideas, disinterestedness and tact in her acts, and she is capable of friendship. Her tastes often carry her to male pursuits, and in which she succeeds. She becomes what is called a "superior woman," and only too often what is called an incomprehensible woman. She has but little guile.

Among the Books

LYDSTON: "BLOOD OF THE FATHERS"

The Blood of the Fathers. A play in four acts. By G. Frank Lydston. Chicago: The Riverton Press. 1913.

In another, and fuller, title, the author calls this production of his "A play, in four acts, dealing with the heredity- and crime-problem." Of course, it is not a play that ever will be acted on the stage; the author himself doubtless had no idea that it would be. But there are some kind of stories which can better be told in the form of a drama than in any other way; and this is one of them. In the form of a novel, "The Blood of the Fathers" most surely would be insufferably dull and boresome—it comes dangerously near being that in one or two places, as it is now. Still, put in the shape of a play, the author, at all events, is afforded the opportunity to declaim certain personal views without placing too great a strain on the printer's font or the reader's accommodation.

And, of course, that is what the play really is—a declamation, in the mouth of the dramatis personæ, of Lydston's own ideas upon the problem of crime and heredity. They are good ideas, all right, and expressed in the virile, red-blooded fashion for which Lydston is justly famous. There you have it in a nutshell—the book is an interesting, kinematographic way of reading what Lydston has to say about the subject of crime in its relation to heredity. And what Lydston has to say on such a subject always is worth reading, in any shape or form.

PERCY: "THE PROBLEM"

The Problem: The Autobiography of a Physician. By Charles Percy, B. Sc., M. D New York: The Shakespeare Press. 1913. Price $1.00.

This is one of those stories of mystery and imagination that from time to time break forth from imaginative minds in the profession to whom some of the elusive problems of their calling made a fantastic appeal. It reminds one of Poe in its motif; although, of course, it has not the impress of Poe's literary genius.

The story is that of a physician who set himself to solve the great problem of life—not academically or deductively, in the contemplative atmosphere of his library, but experimentally and inductively in the active environment of his laboratory. Striding far in advance of Alex Carrel, this doctor undertook the task of making a dead man live by artificial transplantation of organs and tissues. Of all the exciting adventures that attended his efforts, and of the success he attained we say nothing, for that would spoil the reader's interest in the drama. We cannot—we really cannot—say that there is any serious merit of any kind in the story; still, it will serve to while away and make rather exciting what otherwise might prove a dull evening—provided one likes that sort of thing. Well, even for that purpose it is perhaps well worth a dollar. After you have read the book, you can give it to someone else for the same purpose.

HARTMAN AND BIBB: "PHYSIOLOGY AND SANITATION"

The Human Body and Its Enemies: A Textbook of Physiology, Hygiene, and Sanitation. By Carl Hartman, M. A., and Lewis Bradley Bibb, B. A., M. D. With 240 illustrations. Yonkers-on-Hudson, N. Y.: The World Book Company. 1913. Price 65 cents.

It is always a difficult matter to serve up the truths of any science for popular consumption and assimilation in a form which will be at once intelligible and accurate. Yet, in the case of medical science, this must be done, since the truths of medical science intimately and vitally concern public life and conduct. Not only must it be done intelligibly and accurately, but with some degree of human interest. The reviewer fears that we, of the profession, are prone to regard too lightly the attempts that are being made in this direction, as well as those that make them, and not sufficiently to appreciate the importance of the task that those people undertake.

Publishers and authors are doing both the doctor and the layman an invaluable service

in putting out such a book as this little manual. It reads so simply, even childishly, and is so elementary in its character, that we are liable to overlook the fact that in this very simplicity lies its most admirable quality, and even to forget the effort that was necessary to make it thus intelligible even to the child-mind. Those who ever tried to write for simple minds know something of what it costs. But, in truth, this is a splendid little textbook for the school and the home, and we cordially commend it to our readers' good word among their clientele.

SCHAMBERG: "DISEASES OF THE SKIN"

A Compend of Diseases of the Skin. By Jay F. Schamberg, A. B., M D., professor of dermatology, Philadelphia Polyclinic. Fifth edition, revised and enlarged. With 112 illustrations. Philadelphia: P. Blakiston's Son & Co. 1913. Price $1.00.

About as good a dollar's worth in dermatology as there is in the market. The author is manifestly an adept at epitomizing what he has to say. His style and arrangement are such that he is able to pack a great deal of meaty information, in very intelligent shape, in a very small space. Indeed, for all general purposes, this compend contains everything that is necessary to the recognition and treatment of all the commoner diseases of the skin. A terse differentiation table is given wherever such differentiation is practicable and called for. The illustrations are exceptionally good for a book of its kind; which, of course, is an important consideration in a work on skin lesions. We are disposed to think that the author might have devoted a little more space and attention to the use of bacterins in dermal disorders. We offer this suggestion for his consideration when he shall come to the preparation of a new edition.

WRIGHT: "HISTORY AND LARYNGOLOGY AND RHINOLOGY

A History of Laryngology and Rhinology. By Jonathan Wright, M. D., director of the Department of Laboratories, New York Post-Graduate School and Hospital. Second edition, revised and enlarged. Philadelphia and New York: Lea & Febiger. 1914.

Doctor Wright is one of the really great men in American medicine. In whatever aspect of his subject he is found working or talking, he displays a thorough mastership of it and says and does always something worth while. But, if there is any phase of medicine in which he is particularly at home and, therefore, especially interesting and instructive, it is the evolutional phase, whether we apply the term to the science itself or to the organisms with which the science deals.

Wright's special interests, as everybody who knows him is aware, have for many years lain in the region of the nose and throat, about whose biology and pathology and every other angle of being he probably knows more than any other living man. If there is anything to be told concerning the lore of laryngology and rhinology that is not told in this masterly book, we despair of ever finding it elsewhere. The work is a classic, and the higher interests of medical science owe a profound debt of gratitude both to Doctor Wright and to his publishers for such a contribution to its erudition. Surely, the best way to discharge the debt, the way that Doctor Wright will appreciate the most, is that all who are within reach of his book shall avail themselves of it and profit by it. We trust that everyone who sees this notice will forthwith get a copy of the book and read it. There is a rich treat in store for those who do so.

LOCKWOOD: "CANCER OF THE BREAST

Cancer of the Breast: An Experience of a Series of Operations and Their Results. By Charles Barrett Lockwood, F. R. C. S., consulting surgeon to St. Bartholomew's Hospital, London: Henry Frowde, Oxford University Press. 1913. Price $3.00.

One can hardly fail to be struck by the very modest note sounded in the title of this monograph, especially when one considers that the author is consulting surgeon to one of the largest hospitals in London, with almost unsurpassed opportunities for gathering data and making observations in the subject of which he treats. And this modesty of demeanor is carried into the text of the book itself. In style, it is really nothing more than a very unassuming presentation of case-reports from the records of the hospital and the annals of private practice, with such comments from the author as are necessary to the reader's best understanding of the reports.

In esse, however, in the cases themselves, their diagnosis and management, and in the manner of their setting forth, the book embodies the genius of its author, and we feel, as we read it, that we are sitting at the feet of

a great clinician and an able expounder of practical surgical science. There are not many illustrations, and such as there are are very simple and diagrammatic.

The book is not one that calls for much pictorial demonstration. The text is clear and concise—almost choppy in its terseness, with no unnecessary waste of words. The whole work is clinical in character, contributing nothing whatever to the theories of cancer, but furnishing invaluable aid to its clinical diagnosis and treatment.

"CASE-HISTORIES IN OBSTETRICS"

We have just received from Mr. W. M. Leonard, publisher, 101 Tremont St., Boston, Massachusetts, the announcement of another volume in his Case-History Series, this one being Dr. R. L. De Normandie's "Case-Histories of Obstetrics." If this volume is as good as those that have preceded it, we can urge every reader of this journal to secure a copy. These books are distinctly clinical. They give records of actual experience and they point out in a way that carries emphasis the pitfalls in diagnosis so often leading to errors in treatment. When the book finally reaches us, we shall have more to say about it.

COWAN: "DISEASES OF THE HEART"

Diseases of the Heart. By John Cowan, D. Sc., M. D.; with Chapters on the Electro-Cardiograph by W. T. Ritchie, M. D., and on Ocular Manifestations in Arteriosclerosis by Arthur J. Ballantyne, M. D. Philadelphia and New York: Lea & Febiger. 1914.

This book represents an attempt to review the entire subject of the pathology and therapy of the heart and arteries in the light of the most recent advances, and to present to the practitioner the results which have been attained and their bearing upon the clinical aspects of the matter. It is based, so the author tells us, chiefly upon his own personal experience and the records of his own hospital wards; but he also has utilized, where it seemed desirable, the recent writings on the subject and the experience of his friends.

According to that other famous authority on the heart, Mackenzie, whose book we reviewed last month, advances in the knowledge of this subject during the past few years have been principally due to the clearer differentiation of signs of disease, to which the electrocardiograph has greatly contributed. Doctor Cowan bears out this tribute to the worth of the electrocardiograph by devoting a special section to that instrument and its use, written by Doctor Ritchie, an expert in its employment. The newest data derived from the sphygmomanometer, the X-ray, and the pharmacological laboratory also figure prominently in the book.

Altogether, it is a very adequate work upon the heart, well worthy of adoption by the student and the practitioner as their text. We cannot here refrain from remarking upon the excellent character of the paper and press-work, and the very fine quality of the illustrations.

SERVOSS: "THE HYPODERMIC SYRINGE"

The Hypodermic Syringe. By George L. Servoss, M. D., editor of *Nevada Medicine*. Newark, N. J.: The Physicians' Drug News Company. 1914.

On first taking up this book, our very natural feeling was one of wonder as to how the author could find enough to say about so small an article as the hypodermic syringe to fill a volume of over 300 octavo pages. Further examination, however, disclosed the fact that the actual content of the book transcends its title, and extends into a discussion of the various therapeutic measures which utilize the hypodermic syringe as their administrative agent.

Only one chapter, and a short one at that, really treats of the syringe itself. Five or six chapters are then devoted to the drug-remedies commonly lending themselves to hypodermic medication. These are followed by a very long section dealing with serums and bacterins, this occupying at least two-thirds of the entire book. At the end, there is a short chapter or two on anesthetics and on shock. The doctor who invests in this book, therefore, will really get more than the title would lead him to expect. He will find that the title is figurative rather than literal, and that the work really is a very useful summary of the therapeutics and technic for which the hypodermic syringe stands as a symbol.

MOSBY: "CAUSES AND CURES OF CRIME

Causes and Cures of Crimes. By Thomas Speed Mosby, member of the American Bar. Illustrated. St. Louis: The C. V. Mosby Company. 1913. Price $2.00.

It is simply astonishing to contemplate the change which has taken place in the past

twenty years in our attitude toward crime and the criminal. And it is no exaggeration to say that by far the larger part of this change is due to the direct influence of medicine. Indeed, it would be academically correct to say that medicine is responsible for it all. Medicine has intervened, as the lawyers say, and to a very great extent has forced its views upon the subject of the legal and economic aspects, until we now find legal and economic investigators and authorities talking and writing under the impress of the medical viewpoint.

The book now under review is a capital illustration of this truth. Written by a lawyer, it is a brief for the biologic and medical consideration of crime and criminals. Such a book could not have been written by a lawyer twenty years ago. Yet, the standpoint of the law is represented, too. It is, in fact, a brief presentation, from the legal and forensic standpoint, of the data and conclusions which medicine has brought into court during the period named, and furnishes an excellent summary of the present status of the subject for the man who has not had time or opportunity to follow the march of events for himself. It contains a powerful argument for the parole system of penal administration.

HAWES: "EARLY PULMONARY TUBERCULOSIS"

Early Pulmonary Tuberculosis: Its Diagnosis, Prognosis and Treatment. By John B. Hawes, M. D., director of the Tuberculin Department of the Massachusetts General Hospital. With Preface by Richard C. Cabot, M. D. New York: William Wood & Co. 1913. Price $1.50.

This book by Hawes impresses one as an attempt, and a highly successful one, to present the best knowledge of the time concerning the diagnosis and treatment of tuberculosis in practical, usable shape for the general practitioner, with a view to leaving absolutely no excuse for any neglect or oversight of cases of tuberculosis in their incipient period, when, if ever, the measures at our command may be of some avail. The author has simplified the subject so that he who runs may read. One might almost give his book, just as it is, into the hands of the patient himself; and, indeed, with an intelligent patient this might be an excellent thing to do.

Whether, however, this book be given into lay hands or not, it certainly does furnish the practitioner with all the material with which to go to the patient and enlist his cooperation in an intelligent crusade against the disease which they both are interested in conquering. From start to finish of such a campaign, he may consult Hawes' manual, as he would a guide-book on a trip through the Alps. We have looked through it carefully, and we cannot think of a single thing that the author has not thoughtfully provided for.

BANDLER'S MEDICAL GYNECOLOGY

Medical Gynecology. By Samuel Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post Graduate School and Hospital. Third Edition, Thoroughly Revised. With Original Illustrations. Philadelphia and London: W. B. Saunders Company. 1913. Price $6.50.

It is gratifying to note a decided and steady return to sanity on the part of our friends the gynecologists. For many years there seemed to be no place at all in this branch of medical science and practice for therapeutics. Its alpha and omega were surgery. No remedy was offered for the simplest ailment of the most useful pelvic organ except the very obvious one of lopping it off, and no better subject appeared for discussion among gynecologists than the most workmanlike method of lopping. We are unfeignedly glad to know that the hour has struck for all this dazzling butchery to cease, and that physiological gynecology is fast coming into its own. The tide has turned, and whereas there were formerly no internists in gynecology except the smaller and less daring men, now it is the latter who resort to surgery in every instance, while the gynecological leaders are giving more and more attention to therapeutic and plastic measures.

We rejoice to see that the exploration and development of this rather untrodden territory is being seriously undertaken by those who are competent to work it out—that our great gynecologists are shaking off the spell which has so long held them enslaved to the dazzlements of brilliant surgery, and are going about to establish, deep on the foundations of physiology, a system of gynecology which will reduce the surgical element to a minimum, if it does not cancel it from the equation altogether. Dr. Bandler's book is a contribution to this movement on the part of gynecology, and will be found of immense practical value to the general practitioner who is seeking to make gynecology a part of his therapeutic practice.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 5992.—"Hemorrhoids." "Ulcer of the Colon." Dr. J. C. C., Virginia, presents a very interesting case which I think merits much serious consideration. Every case of rectal hemorrhage must be carefully examined. The fact that his man has hemorrhoids may or may not account for the blood. The ulcer in the sigmoid is significant. It is in such cases that an early diagnosis of malignant disease may be found. Hemorrhage is more constantly a symptom of cancer than of any other rectal disease and particularly when there is pain, tenesmus and frequent small stools.

Many patients whose only symptom was rectal hemorrhage have been sacrificed because a cancer was not diagnosed early. Every patient must be thoroughly examined because a case that today may be curable by operation may in a few months be inoperable and death result. Many patients complaining only of a dull aching in the back, a slight discharge of blood in their stool mixed with more or less mucus neglect calling on their physician because they consider their trouble so lightly.

If the hemorrhage is from a pile that may be easily determined by an examination. During defecation and perhaps before the bowels have completely moved a more or less severe hemorrhage will occur which persists after the toilet is finished. The blood may come in spurts and there is little or no pain. With such a history the rectum should be thoroughly examined in a good light with a speculum. The stretching usually starts the hemorrhage which if it bubbles or spurts denotes the little capillary hemorrhoid which is so difficult to find. If however the patient says there is a feeling as though the rectum were only partially emptied (rectal tenesmus) the hemorrhoid large and blue will usually be found within the grasp of the sphincters and unless it is replaced this straining may continue for hours.

Other causes of rectal hemorrhage are Villous tumors with a broad base. These are slow growing, have a spongy feel and are dark red in color, the Polypus with its smooth, elastic pear-shaped body attached by a long, slender pedicle and also the ulcerations due to proctitis, tuberculosis and syphilis.

In the patient described by J. C. C., I am inclined to think that one of these causes is the seat of his trouble. It is well to remember that hemorrhoids are always the result of some other trouble, sometimes acute and at other times protracted, which must be eliminated before any plan of treatment is determined. Sometimes we may operate or again we must be content with temporizing. Atheromatous or apoplectic subjects are relieved of the danger of cerebral ruptures by the loss at nature's safety valve. When cirrhosis of the liver is the cause of the hemorrhoids we dare not operate because either the wound would not heal, other hemorrhoids will promptly appear higher up or dropsy will supervene.

Dr. J. C. C.'s patient is most interesting and I hope we may know more of the course of the disease.

I shall soon present in these columns a paper showing the necessity of the details in examining patients with rectal disturbances.

CHARLES J. DRUECK.

Chicago, Ill.

ANSWER TO QUERY 5993.—J. C. H., Texas. "Fistula in Ano." There is perhaps no more perplexing affliction than a rectal fistula. Dr. Tuttle after gathering 2196 cases days that less than 45 percent were claimed to be cured. Such figures however should not be. Nearly all rectal fistula can be cured except the malignant or tubercular.

The most common cause of these sinuses is infection localized in or about the rectum, as for example intestinal disturbances set up

proctitis or sigmoiditis which results in ulceration. The lymphatics carry off the toxin and an overloaded lymph gland breaks down. The abscess ruptures, contracts and partly heals, and a fistula remains. Or the infection may be in some neighboring organ, as the bladder, urethra, vagina or uterus, a suppurating broad ligament or ovary or a necrosed bone or vertebra. This infection may or may not burrow into the rectum. Just because your patient has a fistulous opening upon the buttock do not presume it must be from within the rectum. Find out just what it is and then you will double your percentage of cures.

The reason most fistula persist is because of reinfection, and this may occur in a number of ways.

First, there is contact infection by such ways as (a) forcing of fecal matter into the sinus from the bowel. (b) Outside infection through the external opening. (c) Retention of the secretions due to the small openings or irregular shape of the fistula. (d) Degenerating granulations lining the sinus and often associated with dense cicatricial tissue outside of this. In a second class of cases the venous or lymphatic circulation is at fault. The human animal spends most of his hours sitting or standing and in this position there is a sluggish return circulation. Sometimes a sinus may fail to heal even though it is thoroughly cleaned because the lymphatic connection is still carrying infection from the rectum (ulcer or proctitis). Draining the abscess temporarily relieves the system, but as the primary source is still present a virulent reinfection occurs. This is an important factor because the phagocytic action of the white corpuscles is insufficient.

I do not pack my fistula wounds because it obstructs the drainage. A very little back pressure is perhaps all that is needed to drive infection into new cellular tissue and start a new focus. It also prevents rest to the parts. I give my patients hot antiseptic irrigations and sitz baths during the whole period of cicatrization. This relieves the venous and lymphatic circulations. I also add a good tonic and internal antiseptics as needed.

CHARLES J. DRUECK.

Chicago, Ill.

Queries

QUERY 6014.—"Diet in Diabetes." E. S., Wisconsin, requests us to publish a diet chart for diabetics.

As a sample of a preliminary diet, which we have found to meet the requirements in the majority of well-defined cases, the following menu for a day may serve as a guide:

Breakfast: Tea, 5 Grams, infused in 200 Cc. of boiling water; ham, 150 Grams; 1 poached or soft-boiled egg.

Lunch: Cold roast beef, 200 Grams; cucumber, 60 Grams, with vinegar or lemon-juice, 5 Grams; olive-oil, 10 Grams; salt and pepper to suit the taste; Apollinaris water, 400 Cc., with (or without) 20 Cc. of brandy; coffee without milk or sugar.

Dinner: Clear bouillon, 300 Cc.; beef, 250 Grams; butter, 10 Grams; green salad, 80 Grams; vinegar, 10 Grams; olive-oil, 20 Grams; 3 sardines; Apollinaris water, 400 Cc.

Supper: Two eggs; Seltzer water, 400 Cc.

If you have access to Hare's "Modern Treatment," we suggest reading pages 439, 440 and 441 of volume ii, where you will find the Goodall chart reproduced. Here, also, Hare calls attention to the advisability of considering together the results of urinary tests with the records made of the diet, saying, "My own treatment of patients has notably improved since I began the use of combined dietary and urinary charts."

It must be remembered that the diet of even a normal individual varies greatly. However, a normal ration for a man at work would contain about 450 Grams of carbohydrate and 100 Grams of protein, equivalent to 15 Grams of nitrogen and 75 Grams of fat; hence, two-thirds of the diet consists of carbohydrates. With a properly prepared diet-chart the quantities of carbohydrates, protein, and fat can easily be calculated.

The diet of the diabetic patient should contain the same number of calories as that of the normal individual, and in addition sufficient to offset the loss of sugar and b-oxybutyric acid, together with the loss due to increased metabolism.

In reckoning the total calories, it is always necessary to bear in mind that for each Gram of sugar in the urine, 4 calories are lost in the organism, and for each Gram of b-oxybutyric acid, 5 calories.

Instead of instituting immediately a carbohydrate-free diet, Hare recommends, in untreated cases of ordinary severity, the restriction in the neighborhood of 150 Grams; the patient being provided with the Goodall

chart and told to eat anything there recorded, provided the total carbohydrates do not exceed 150 Grams. After forty-eight hours, the urine is examined, and frequently voidings carrying 5 percent, or even more, of sugar at the outset, become sugar-free.

On the other hand, the appearance of acidosis in a patient upon the above diet shows the disease to be of a severe or at least moderately severe type. Most diabetic patients seldom become sugar-free upon a diet containing 150 Grams, and it is necessary to restrict the quantity to 125 Grams, preferably by omitting milk. If sugar still persists at the end of twenty-four hours, the bread ration is cut one-half, the next day the rest is withheld. Should sugar continue to be present and acidosis absent, further restriction of the carbohydrates follows, and oatmeal is omitted or the allowance of fruit reduced one-half, so that the patient receives from 70 to 75 Grams of carbohydrates. Should it be necessary to reduce them further, place the patient upon a protein and fat diet, with the addition of 500 Grams of vegetables containing from 5 to 10 percent (not more) of carbohydrates, and 250 Cc. of cream; the entire amount of food containing 16 Grams of carbohydrates. Almost always the urine becomes sugar-free under such circumstances.

The Goodall-Hare method of diet is extremely simple and should prove satisfactory in the great majority of cases.

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QUERY 6015.—"Urethral Fistula." J. R. P., California, has under treatment a case of fistula penile, which refuses to heal, and he would like our opinion as to the best course to pursue. The patient had gonorrhea, and just back of the glans penis the mucous membrane swelled up and pointed like a boil and finally broke, producing a fistula leading from the outside into the urethral canal. Strong astringent and even eschrotic solutions do not seem to have the effect of closing it up. The patient's general health seems to be good, except that any scratch or abrasion of the skin heals up slowly. When the patient urinates, the urine comes out at the orifice as well as at the meatus.

It is quite evident that in this case your patient suffered from a periurethritis or a periurethritic abscess in the fossa of the frenum. This is not an uncommon condition. The nodule due to the inflamed urethral glans is about the size of a pea when in the region of the frenum. If incised before suppuration has begun, it will be found solid; later, when the abscess is formed, we have a thin-walled sac of pus. If you have access to Guiteras' "Urology," you will find, on pages 475 and 476, cuts illustrating the condition exactly.

Acute glandular inflammation of one of the glands of Littré occurs usually in the second or third week of an acute attack of urethritis. The nodule may disappear (undergoing resolution), rupture into the urethra or burst externally. After rupture of the abscess, the lesion may heal or leave a suppurating sinus leading into the urethra, opening externally, or both ways, and result in a narrow urinary fistula.

It must be borne in mind that infection may remain in such sinus for a very long time, and whenever the patient has a recurrence or relapse of urethritis, an abscess or discharge into the sinus will accompany it. Usually a fistula situated about the frenum is short and straight, surrounded by cicatricial tissue and behind a stricture of the canal in the fossa navicularis. The outer end is generally round, about the size of the head of a pin.

Treatment is surgical, the operations comprising urethrorrhaphy and urethroplasty. For technic, see Guiteras or similar modern work on genitourinary diseases. Good results may follow electrical treatment of such fistulas.

Insert a dull-pointed needle-electrode (attached to the negative pole of the galvanic battery) into the fistula (the indifferent pole being placed to any part of the body) and turn on the current. After the electrolytic action has taken place for thirty to sixty seconds, disconnect and pass a small soft-rubber catheter into the bladder, and retain it in place for a few days, to prevent the urinary stream from again dilating the fistulous tract.

If any stricture of the meatus or urethra in the region of the fossa navicularis exists, it should be cut before the fistulous sinus is subjected to electrical treatment. In this way, subsequent strain of the sinus during micturition is prevented.

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QUERY 6016.—"Contracture of Digits Following Burn." J. E. H., Texas, writes: "I am treating a child, eighteen months old, who was burned in the palm of the hand. He dressed the hand straight, anticipating drawing of the fingers. Now one finger and thumb are drawn toward the palm—half closed. The flexor side of the finger and thumb look as though a cord was pulling them down. Of course, that is cicatricial tissue, involving only the flexor side and could be dissected out; but, what I want to know is, whether you would advise doing this,

and to what extent? The main body of the burn is in the palm. Would you dissect this tissue away from the fingers only or try to get it all away?

"In treating females for gonorrhea, when you find little growths about the meatus, would you excise such or apply remedies to reduce them? How long would you use gonococcus bacterin?"

I should think that it would suffice to sever the cicatricial bands, secure full extension of the extremities, and then bring the severed surfaces together in a direction opposite to that previously existent. Extension of the finger should be maintained until the new cicatrix has lost all tendency to reproduce the deformity. However, bear in mind, doctor, that a certain degree of extensibility exists in cicatricial tissue. Continued traction and pressure (never violence) may permit the affected members to assume ultimately an almost normal position.

Injections of thiosinamin and exposure of the cicatricial tissue to the x-ray may result in absorption.

If conditions are such that section of the contracting bands will not suffice, you must dissect away the cicatricial mass at the digital ends. Be sure that enough cicatricial tissue is removed to allow free movements and extension of the fingers. If the hand-grasp and palmar movement are not materially interfered with, we see no reason for more extensive dissection. It is impossible, of course, without a most thorough examination (and, perhaps, incision) to form an intelligent opinion as to the condition of the tendons, but, in all probability, they are intact.

The treatment of the small growths about the urinary meatus in the female depends, necessarily, upon their character. Caruncles should be excised, and small excrescences destroyed by the application of silver nitrate or lactic acid. I have found many of these growths disappear under the application of thuja. See any modern work on the treatment of female diseases, especially would I recommend "Urology," by Guiteras.

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Query 6017.—"Masturbation by Female Child." A. W. T., California, forwards a specimen of urine for examination and presents the following clinical data: "The patient, a girl of 7 1-2 years, was adopted by well-to-do people at the age of eighteen months. She masturbates steadily and her case has baffled several physicians. In addition to other measures, her clitoris has been unhooded, but all without much benefit. Her mother was of a very kind disposition, fond of music, and intelligent, but of a most frivolous nature. Her father was of English-Scotch descent. Everything imaginable, regardless of trouble and expense, has been tried; but the child, who is of a very kind disposition and unusually intelligent, seems unable to resist the impulse to the bad practice. Her urine has always been very offensive of odor, but this was relieved by the use of urotropin. Whenever the urine remains in contact with the skin it excoriates the latter to the extent of leaving a scar; which tendency, however, also is controlled by the urotropin. While she still was very young she was heard to laugh and talk to herself in the night, after a man had exposed his person to her and fondled her genitals. Since her hands have been kept tied above her head when put to bed, she is somewhat better. When caught in the act, she will hold her hands out and request her mother to punish her, and she tries, it seems, all she can to overcome this morbid desire. Personally, I have never examined the girl, but intend to do so as soon as I get your report on the urine; meanwhile awaiting whatever suggestions you may kindly offer."

While our pathologist has tested the specimen of urine qualitatively, it is to be regretted that you failed to state the total amount voided in twenty-four hours, so that we are unable to estimate the total solids and urea. However, the test shows a state of marked acidemia and oxaluria, and this justifies the surmise that possibly the girl's tendency to masturbate to a great extent results from local irritation, caused by the high acidity of the urine and the passage of oxalates.

Let us warn you not to be too ready to believe that the bad habit started after the child witnessed the exposure by the man, as related. Indeed, at such an early age, if any impression at all were made, it rather would have been one of fear. It is different, though, if any person handled the child improperly, for then the masturbating habit might have been started.

Frankly, though, we are inclined to believe that all such extraneous influences can be ignored and that you are dealing with an autotoxemic neurotic child. If you will proceed to correct the disordered body-chemistry, relieve the local irritation, and call to aid psychotherapeutic influences—that is, gently, but firmly, impress upon the little one the conviction that she can, that she will, overcome her habit—you will win out. It is of no use to present the higher

moral aspect of the matter, but the mother or you yourself can make her understand that "nice children do not do such things," and that she is injuring herself and will, as she grows older, become a nervous, ill-featured, and unprepossessing girl, instead of (what she naturally wishes to be) a pretty, pleasing, and respected young woman.

It would be well, of course, for the mother to go into the sex-matters gradually, clearing away any mystery that may exist in the girl's mind and make her understand the importance of woman's mission and the necessity for moral and physical cleanliness in mothers-to-be.

I have been successful in getting children to understand these things by comparing them with other habits that are to them particularly objectionable. For example, Lucy L. picks her nose, and is, therefore, a very unpleasant child; picking of the nose will not prove really injurious, whereas masturbation, being practiced in secrecy, is of itself, unobjectionable to others, yet, inevitably is going to work harm to herself; that it not only affects her character, but will render her unable to keep up with normal girls in school, society, and business, leaving a definite, always distinguishable mark upon her physical being.

If the habit has become very firmly established, explain to her that, in order to enable her to overcome the trouble, it will be necessary to use some restraint for a time; but don't tie her hands over her head, or tell her bogie stories of any kind, for in this way you only will defeat your object by arousing her indignation and opposition. It is a simple matter to place the child's hands in gloves and fasten the latter with safety-pins to a belt. Also, the body itself may easily be protected from handling, by suitable covering.

All measures will fail, however, unless the real condition for this morbid desire (that is, the irritation) is corrected. Of course, if there is a distinct erotic taint or even a strongly marked sexual tendency, there is going to be more or less trouble always, and we can only regret that the foster parents made such an unfortunate selection.

The English-Scotch parentage of the child, mentioned in the letter, should guarantee a certain amount of moral stamina. Also, the fact that she requests the mother to punish her proves very conclusively that, while she cannot really understand why the action is wrong, she is willing to believe it to be so and to try to refrain from doing something she should not do. But bear in mind, doctor, that it is a difficult matter to make a child really believe that she should not scratch a place which itches; the natural instinct transmitted through a host of ancestors teaches us that itching is relieved by scratching, just the same as we should unconsciously place our hand over an area suddenly bruised or spit out some obnoxious substance from the mouth. You must realize that here you have an "itchy spot," and that the tendency is to scratch or rub it. Base your treatment upon this primary fact, then slowly but gently instruct the little one on the moral phase of the matter.

I would suggest that the parts be thoroughly cleansed with a mild alkaline solution, morning and night, then inunct with mild borated petrolatum or equal parts of white petrolatum and ointment of zinc oxide. If there is any local congestion, apply aqueous calendula and hamamelis freely in place of the alkaline solution. Also, look out carefully for pinworms.

Internally, give nucleinated phosphates, two granules between meals; 15 to 20 grains of sodoxylin, dry on the tongue and swallowed with a little water, an hour before food; 2 drops of dilute hydrochloric acid in sweetened water (call it lemonade) with meals. The bowels must be kept open. The skin must be made active with salt sponge-baths. The child should sleep lightly covered.

QUERY 6018.—"Paralysis of Bladder." T. E. T., Iowa, was called upon to treat an unmarried man of 64 for retention of urine, and was told that thirty years ago he contracted gonorrhea, but that it did not give him much trouble. The catheter, T. E. T. explains, entered the bladder without difficulty; urethra, however, was very tender. That was March 1. At present there is no tenderness in the urethra, but the patient has to use the catheter all the time to empty his bladder; the latter is not sensitive. For washing out the bladder, as much as 3 pints of water is being used, but the patient cannot feel the distention of the bladder, nor has he any desire to urinate. His bowels have to be moved with laxatives. The prostate gland is not enlarged. After twelve days of this treatment the patient felt much better and has continued to feel quite well.

To overcome hyperacidity, alkalis, strychnine, and diuretics, together with high-frequency-current vibrasage, and dilatation of the rectum have been employed. The catheter passes through the urethra and enters the bladder with ease, and no trouble to

draw the water is experienced. There is no dribbling of urine. The bladder seems to be entirely inert. No symptoms of uremia are present. The patient has been a farmer for most of his life. He does not use intoxicating liquors or tobacco; is regular in his habits. What can be done?

Before we can prescribe for your patient intelligently, doctor, we must have a much clearer idea of the underlying conditions. It would be well to send to our pathologist, for examination, a specimen of urine (4 ounces from the 24-hour output, stating total quantity voided), together with a specimen of prostatic discharge.

The fact that you can inject as much as 3 pints of water into the bladder without the patient's feeling the distention would lead us to suspect vesical paralysis. Still, under such circumstances, it is rather peculiar that the vesical sphincter is not involved.

Obstruction evidently may be excluded. Besides, you state that the prostate gland is not enlarged and no stricture present.

Chronic retention of urine may be obstructive, traumatic or paralytic; it may be due to paraplegia, hemiplegia (from disease or injury), tabes, lateral sclerosis, prostatic hypertrophy, prostatic tumor or abscess or to urethral stricture.

In paralytic cases retention is commonly observed. In all cases where the bladder wall is partly or entirely paralyzed, more or less residual urine exists, and cystitis is sooner or later set up.

In atony of the bladder, cold spongings, or douchings over the pubes, counterirritation over the spine, and the administration of large doses of strychnine are indicated. Intravesical injections of cold water, beginning with tepid and gradually decreasing the temperature to 60 degrees, may be tried.

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QUERY 6019.—"Congestive Dysmenorrhea." C. H. S., Indiana, asks advice in the case of a woman of 48, primipara, who has had no miscarriage. Menses were regular up to August, 1912, then became irregular; three weeks between periods, and the flow lasting eight or nine days. Since August, the periods are painful and clots are passed. For the past year the flow continues fifteen to nineteen days, and the woman suffers very much. She locates the pain over the left ovary, and the Doctor detects a hardness in that region. The womb is indurated and enlarged. There is no ulceration, only just an inflamed condition of the cervix. She passes blood, also a yellowish watery fluid of a bad odor. She is a large woman, weighing about 175 pounds; does not have a really bad appearance, although somewhat anemic. Appetite is fairly good. She is very nervous. "Have we symptoms of cancer in this patient?"

It is, of course, impossible for us to venture a diagnosis without a much clearer conception of basal pathological conditions. It is possible that the woman suffers from endometritis. As you are aware, congestive or colicky dysmenorrhea is nearly always associated with some local diseases of the pelvic organs —parametritis, salpingitis, ovaritis, endometritis, fibroid tumor of the uterus, subinvolution, retroversion, misplacement of the tubes or ovaries, or a combination of some of these factors.

"Colicky" dysmenorrhea occurs frequently when the uterus is trying to expel a clot or fragment of mucous membrane, or other body. In ordinary menstruation, the amount of the blood lost is not sufficient to prevent its escape from the uterine cavity, but, if the hemorrhage is excessive or the outlet narrow, the blood is held up in the womb and then clots. These clots must be expelled, the uterus has to contract more forcibly, "colicky" dysmenorrhea results, and this condition continues until the irritating clots are expelled.

On the whole, we are inclined to suspect that your patient has salpingitis or ovaritis; still, the possibility of the presence of a malignant neoplasm must not be lost sight of.

You should send specimens of the blood (for the Abderhalden test) and of the uterine discharge (the yellowish watery fluid) to our pathologist, for examination. At the same time, outline diagrammatically the area of tenderness and hardness in the ovarian region. Is there any possibility of venereal taint?

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Painless Childbirth: A Letter and an Answer

AN EDITORIAL which appeared in the July number of CLINICAL MEDICINE elicited the following anonymous letter, postmarked New York City. Ordinarily we do not print unsigned letters, but this one was of so much interest to us, and so plainly written from the heart, that in this instance we make an exception, in the hope that our comment may come to the attention of "A Humane Woman," whose point of view is doubtless that of many other women.

Editor, THE AMERICAN JOURNAL OF CLINICAL MEDICINE, Chicago, Ill.

DEAR SIR: The spirit of the editorial in the July number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE on "Painless Childbirth: A Wonderful Discovery" surprises me greatly, and almost causes one to believe that there are more physicians than the one referred to in *McClure's*, who acknowledged that he had no interest in the "twilight sleep" as he experienced pleasure in seeing a strong normal woman in the throes of childbirth with her first child.

If this method has been known for some years, as stated, *why* have not physicians used it in this country, in private practice as well as in maternity and lying-in hospitals? It seems clear that the medical profession needed just what *McClure's* has given them stamped with Germany's label, to bring to the front the fact that the method can be successfully applied here.

I have always had a deep respect for the medical profession, who, to me "went about doing good" quietly and without ostentation, but if they have held back a method which relieves pain, and keeps women happy and contented and without dread during the most trying period of their lives, why should they criticise Germany for scoring one in getting ahead of America? If it has not been withheld through indifference to physical suffering, will the editor please state the cause?

Since anesthetics have made possible great operations without the patient being conscious why not the "twilight sleep" for childbirth?

Yours truly,
A HUMANE WOMAN.

We are obliged to admit that this correspondent raises a very pertinent and searching question of human interest, which the medical profession cannot ignore. It transcends the formalism of ethical controversy. It is a cry from the heart of suffering womanhood, which urgently demands and irresistibly compels an answer.

So far as we are personally concerned, we do not feel that the reproach touches us. For our part, we have done, as explained in our previous editorial, all that in us lay to promulgate the knowledge and practice of the twilight sleep—not directly to the public, because that is not the function of a medical journal, but among the profession, so far as we have been able to reach and influence it—and we repeat that, through our efforts,

thousands of physicians in this country have been unostentatiously practicing the procedure for the last decade, and many thousands of women have enjoyed painless labor under injections of hyoscine and morphine.

We take it, however, that our correspondent's letter is addressed, through us, to the profession at large, and especially to those leaders of the profession and those agencies of publicity and education in organized medicine which might be presumed to bring so important a matter to the knowledge of the public. To them, we repeat, she puts a searching and compelling question which cannot be evaded.

Why has there been a conspiracy of silence? Nay, it is not even a merely passive attitude of silence; for the editor of *McClure's*, in a communication to us, says, "There seems to be a highly organized opposition in this country to this new treatment," and asks, "Could you inform us as to the reason for this?"

We do not believe that the passive neglect, far less the active opposition, is due, as our correspondent suggests, to deliberate indifference to physical suffering. With the profession at large it has been due to the influence of constituted medical authority, which has persistently and even bitterly opposed the procedure.

In explanation of this attitude on the part of the powers-that-be, we have only to point out that such bitter opposition has always been, and we suppose will continue to be, the early attitude of organized medicine—as, indeed, it is of all constituted authority—toward innovation and progress.

It is safe to say that no real innovation ever originated within the organized constitution of any science or craft. It has always come from some individual, or a nonconforming group of individuals, and pushed its way in the teeth of organized opposition.

In medicine, in particular, it would seem as though this organic opposition to innovations which were on the face of them worthy of adoption has been a factor of great hindrance and embarrassment. And this very branch of medicine of which we are now speaking—midwifery—furnishes a most conspicuous example.

Without doubt the two most epoch-making innovations in the annals of obstetrics were the demonstration of the infectious nature of child-bed fever by Holmes and Semmelweiss, and the application of chloroform anesthesia to labor by Simpson. Yet orthodox medicine abused Holmes and hounded Semmelweiss to a madhouse for his pains, and constituted medical authority set its smug face against Simpson's sacrilegious violation of the primal curse until (God save the mark) *fashion* did what science and common sense failed to do, and the use of chloroform by Queen Victoria in her confinement brought obstetric anesthesia into vogue.

This, we think, is the true explanation of the "highly organized opposition in this country to this new treatment"—to the twilight sleep of hysocine and morphine. It is the natural resistance of an organized body to change. It is what the Greeks called misocainia—the hatred of new ideas, which would wrench us from our fixtures; for to quit our old fixtures, especially if we have sat in them in comfort for a long time, is no easy business, hence we demur, we resist, we even give battle, and, while we may suspect that the new idea is above us, we try to persuade ourselves (laziness and vanity earnestly consenting) that it is below us.

For years organized medicine has been passively and actively resisting this innovation by the momentum of established authority, chiefly with contemptuous disparagement. Can any good thing come out of Nazareth? Suddenly public opinion confronts it with its neglect of an apparently great and beneficent discovery, and demands why it has been neglected and withheld. The great men of medicine are interviewed, and they all, with one accord, resort to the very human expedient of excusing by accusing. Irritably resentful at being found unready and uninformed when questioned about it, they seek to justify themselves by bitterly attacking the innovation itself. "What, *that* dangerous, heinous procedure! No, thank you. We know all about that quackery, and we decline to have anything to do with it."

Of course there is a certain element of danger in the twilight sleep, as there is in every anesthesia. Of course the procedure is not the simple June-holiday matter that the writers in *McClure's* would make it appear. Of course the half-truths about medical subjects exploited in the popular press misinform and mislead the public.

But whose fault is it that they are only half-truths? And is it not much more blameworthy to suppress truth altogether, as organized medicine has done?

We confess we did feel a little sore that a report from Germany should seem necessary to establish, as a matter of vogue, that which

we had labored many years to establish as a scientific procedure—much as Simpson might have felt when Queen Victoria made obstetric anesthesia the fashion. But our impatience was directed against our own profession rather than against the report itself; certainly not against Germany for "scoring one in getting ahead of America." We felt, as our correspondent says, that the medical profession really did need just what *McClure's* has given them, stamped with Germany's label, to wake them up; and it made us a little mortified to think that it should be so.

None of the criticism that we have here indulged in must, of course, be construed as applying to those physicians—chiefly constituting the family of CLINICAL MEDICINE—who have fearlessly and conscientiously availed themselves of this valuable procedure in childbirth, and given aid and comfort thereby to hundreds of their parturient patients. As we explained at the outset, we have been answering, over the shoulders of our own readers, for the great body of organized medicine, which, nevertheless, will ultimately have to answer for itself to the indictment brought against it by our correspondent in the name of humanity.

The imagination of Darwin or Pasteur, for example, is as high and productive a form of imagination as that of Dante or Goethe, or even Shakespeare, if we regard the human uses which result from the exercise of imaginative powers, and mean by human uses not merely meat and drink, clothes and shelter, but also the satisfaction of mental and spiritual needs.—Dr. Charles Eliot.

THE STATUS OF THE HARRISON BILL

The Harrison Antinarcotic Bill is still pending in the United States Senate, all efforts to force it through quickly having failed on account of various temporary yet troublesome obstacles (amendments) introduced at inopportune times. Aside from the amendment introduced by Senator Nelson, others have been proposed by Pomerene, of Ohio, and Lane, of Oregon. It is probable that none of these attempts at revision will receive serious consideration, since every senator understands that to attempt to change the bill now would probably result in its defeat or indefinite postponement—and we believe that every right-minded person is anxious to see it become a law.

The Harrison bill now stands at the head of the calendar. It has been brought up in the Senate several times, and only the pressure of trust legislation, which absorbs the attention of Congress at the present time, prevents its receiving the hour or two of discussion which should result in its immediate passage. The medical profession favors the bill, its only opposition being to the introduction of amendments which would hamper the doctor. We hope that every reader of these lines will use what influence he can command toward securing its prompt and final consideration. Get behind it, but oppose changes that would result in curtailing the reasonable liberty of the physician, thereby rendering his humane work less efficient. Can't we all help?

A LIFE THAT SHOULD HAVE BEEN SAVED

Yesterday a very dear friend of mine received a telegram from Cleveland, bringing the sad news of the death of his nephew, a bright young man, only twenty years of age, the main financial support and the fond hope of a widowed mother. The boy was the secretary of a prominent railroad official and with him was called to all parts of the country. Much of the time he lived with his chief in a private car, which was sidetracked in all sorts of places and naturally drew its supply of water and food from all sorts of sources. It is not to be wondered at that the boy contracted the attack of typhoid fever which finally caused his death.

Theoretically, typhoid fever can be prevented by rigid control of the food and water supplies of the people. There is no doubt that the death-rate has been considerably reduced as a result of the increased attention to public sanitation and private hygiene during the last twenty years; but, in spite of the millions of dollars poured into new water systems, into the hypochlorite treatment of water-supplies, the scientific disposal of sewage, the inspection of milk, and the condemnation of decomposed and contaminated foods, during the last few years the death-rate from this disease has remained almost stationary. Sanitation alone does not seem to be sufficient to solve the problem of prophylaxis.

Fortunately there is one expedient that can be depended upon to prevent typhoid fever; and that is vaccination. By this means the disease has been banished from our army. In many hospitals, where nurses and physicians formerly too often became its victims, it is not now feared by those in attendance. Wherever tried it has proven a dependable

prophylactic. It is almost devoid of danger, and no healthy young adult need experience the slightest fear in submitting to inoculation.

There is not the slightest doubt that if my friend's nephew had received the prophylactic typhoid injections he would be alive today.

Why didn't the boy receive this protection? Who blundered? The blame must be brought to the door of the medical profession, which, as a whole, has failed to grasp the importance of this simple procedure, and has not brought its live-saving value to the attention of the laity with the earnestness and vigor which alone can compel its general adoption.

Certainly every railroad man, every traveling man, every employee of a great corporation located in a community where there are probabilities of contracting typhoid fever should at least be given the opportunity to receive protection—if necessary, at public expense. If an epidemic, however small, breaks out in a city or town it can often be jugulated in its incipency by the use of the bacterin. *There should never be the second case in any home*, provided the doctor is called early enough to anticipate the development of the disease by early inoculation of the members of the household.

We appeal to the readers of CLINICAL MEDICINE to give this subject the earnest consideration it deserves. The typhoid season is now at hand. We can save many useful lives by prompt and energetic action *now*.

When a fellow knows his business he doesn't have to explain to people that he does. It isn't what a man knows but what he thinks he knows that he brags about. Big talk means little knowledge.—George H. Lorimer.

THE GREAT NEED—WORK!

Strolling through a country town, the doctor whom I had come to advise told me the owners of various properties. Finally I remarked that three men seemed to own more than half the town. "They do," replied the Doctor; "they are the only three men in town who work."

Take any town in this country, and the leading doctor is he who works hardest. He reads more books, takes more journals, goes to more society meetings, has more apparatus, and—he makes more money. Besides, he does better work than do any of his colleagues. Furthermore, if public work of any kind is needed, he is the one selected to do it, because, "if he says he'll do it, it will be done."

Ability, learning, pull, all these are subordinate matters—work is the one thing that counts in the long run. A salesman told me that in his early days he would get discouraged if he failed to make a sale during several successive days; and he then felt inclined to sit in the hotel lobby and mope—bad season; poor territory; competitors had business cinched; wasn't cut out for a salesman, and all that. Then he would rouse himself and determine he would "die fighting," and he'd get an order from the next man he tackled. Finally he began keeping an account of the number of hours he devoted to his work each week, and he found that his sales corresponded closely with the number of hours he spent soliciting business.

Somebody once said—and not at all irreverently—that, had the story of Eden been written by a European instead of by an Asiatic, work would not have been represented as an appalling catastrophe, a condign punishment. The bright author of "Angel Island," a serial published in *The American Magazine*, represents the men as languishing and quarreling, until they become interested in work; whereupon they resumed the normal masculine equilibrium.

Doctor, are you working? Doing your best, even a little bit better? Trying to improve yourself? Taking time to read and trying new methods? Keeping up with the times? Making your patients understand that you never lose a chance of bettering your means of treating them? Letting them comprehend that the surplus income you get from them is a public trust, that comes back to them in betterments? Looking after the sanitary conditions of your community? Assuring the functions of public-health advisers as a matter of course? Considering the progress of the community along the lines nobody understands as well as you? Are you studying and recording your cases scientifically, so that you can pass any state-board examination on them? Making laboratory tests of urine, blood, and feces?

If you are doing all this, I need not ask what is your relative standing in your community. You are a useful man, a good citizen, a well-trusted doctor.

Work is a necessity to the physical, mental, and moral well-being of any normal man.

Somebody once criticized me because I asserted there were worse things than war: that the bold young bandits who terrorized the city might be bold young heroes if their country called them to arms. Well, isn't it true?

Take a certain sleepy village—1500 white citizens, and just three men of them working. Take a census of the town, and you will find one hundred able-bodied men that are absolutely useless. Sweep them together into a company and ship them off to the Philippines to civilize the Moros with book, spade or bayonet. Isn't there an atavism, a harking back to the savagery where the men fought and the women did the rest? Surely. And a good way to cure such atavistic developments is to give them some fighting to do. Believe me, plenty of these idlers would find a hoe less to be dreaded than a Moro with bolo attachment.

With some men this instinct is real, and they are what all men were once—fighters. Let them fight. The world is not yet ready for universal peace. There are wrongs to be righted: lusty, strong-hearted fighters are needed badly. There is the arch-enemy, the old dragon, the saber-tooth tiger—ignorance—and not half enough champions to do all the slaying he needs. What would the world do without its men of war, its born fighters?

A PRESCRIPTION: BEE STINGS

Every year, at least once, the journals resurrect the suggestion that bee-stinging is a therapeutic agent of singular efficacy. Just now I have before me a cutting from *The Chicago Daily News*, giving some interesting data. Quoting from *London Tid-Bits*, doctors are getting wonderful cures of rheumatism and sciatica by having the patients stung. People over eighty years of age have been thus cured of rheumatism.

The explanatory hypothesis is, the presence of formic acid in the venom, and this acid is declared to be the best antidote for the poisons that stiffen joints and muscles. As this stiffness is largely owing to the hyperplasia of connective tissue that gradually advances with the years of active muscular exertion, formic acid must exert a remarkable solvent influence over this tissue.

But the astute news reporter doesn't stand still, by no manner of means; his imagination is still working, and this year he has added a few further marvels to the annual edition of the marvelous tale of the busy bee. No less a problem than inebriety is subjected to this magic apiary solvent. "Five men were being treated in a London hospital for rheumatism. Four of them were seasoned drinkers, the fifth a confirmed drunkard. Bee stings cured all five of rheumatism, and they destroyed the desire for alcohol as well. Even the sight of drink nauseated these quondam topers, and several months after leaving the hospital not one had again touched liquor. Later observations showed that a bee sting quickly sobered an intoxicated person, and also that when drinking men begin working with bees such persons soon lost their craving for alcohol."

All of which is very important—if true. The name of the hospital is judiciously suppressed; and the whole story is doubtless a newspaper yarn. Still, it has its good points. The cure should appeal to the women. With what keen enjoyment the wife of a sot would appreciate the application of a peck of bees to her inebriated liege lord. The extra-stinging kind, please!

℞

Bumbles.....congius ss (principium)
Hornets.....octarius j (adjuvans)
Wasps.....octarius ss (corrigens)
Honey-bees .....octarius jss (excipiens)
Misce. Signa: To be well shaken, then apply briskly.

Is there anything in it? Possibly. Probably not. We recollect reading some years ago of a trial in which the patient, after receiving more than 6000 stings, decided that no benefit had accrued. Yet, the Homeopathists assert that they get good results from the gastric administration of apis mel, and excellent practicians of other schools corroborate these claims.

If, perchance, any reader wishes to try the bee treatment, he should, by all means, obtain the patient's consent first, and a waiver as well. This writer once prescribed for an old rheumatic woman a liniment to which he incautiously added some essential oil of mustard. To make sure of its efficacy, a good deal was added.

The thing cured her. At our next visit, the woman wasn't noticeably rheumatic. We were young then and fleet of foot—really, some sprinter; but we barely reached our carriage in advance of that old dame and her broom. The cure was permanent, too. At least, we have never visited the locality since!

EMETINE DEVELOPMENTS

The enthusiasm developing over the discovery of the curative power of emetine in amebic dysentery may, we trust, lead to two steps further.

One is the thorough testing of other active principles in the maladies for which the parent plants have been advocated. While much of this work has been done by Burg-

graeve and his successors, the field is by no means harvested. Many alkaloids are as yet known only to the chemist and have received no attention from the clinician.

The other step is the application of emetine in other maladies. Beside its powers in dysentery and its application in pulmonary and bronchial affections, emetine is attracting attention as a remedy of surprising efficacy for pulmonary and other hemorrhages.

The next application may well be a trial of this potent alkaloid in alcoholism. Treating a drunkard, on the verge of delirium tremens and craving drink incessantly, Doctor Waugh gave the man a full dose of emetine. Within five minutes the patient was asleep. he slept eight hours, and awoke free from the craving for alcohol, his nerves steady, his appetite restored, ready to eat his breakfast and go to his business. Two spinach-colored stools showed the effective cholagog action.

As an eliminant it limits the field for calomel, anciently known as panchymagogus quercetanus, for its power of acting on all the depurating apparatus at once.

The two alkaloids of ipecac ought to exchange names, since cephaeline is the more effective as an emetic, while the chief uses of emetine depend upon its emetic action being avoided. Cephaeline is said to be more acrid and irritating, but the writer's tests of the two, made with emetine and cephaeline of undoubted purity, showed a similarity of action much closer than the books aver.

They ain't no use in kickin', friend, if things don't come your way;
It does no good to holler 'round, an' grumble night an' day.
The thing to do 's to curb yer grief, cut out your little whine,
An' when they ask you how you are, jest say:
"I'm feelin' fine."

Yer heart may be jest bustin' with some real or fancied woe,
But if you smile, the other folks ain't very apt to know.
The old world laughs at heartaches, friend, be they your own or mine;
So when they ask you how you are, jest say:
"I'm feelin' fine."

—Farm and Home.

MUST WE ANSWER CALLS?

Dr. D. Winton Dunn, of Duquoin, Illinois, refused to visit a sick child, because the father had not paid his last indebtedness to him. The father shot Doctor Dunn dead.

So many angles has such a case that nobody not conversant with the circumstances can form a just judgment of it. Was there justice in the man's refusal to pay or was it because poverty rendered payment impossible? Was no other doctor available? Was it a case of life or death?

"Judge not, that ye be not judged." Do not too hastily condemn even a murderer, not knowing just why he took another's life.

Nevertheless, it does seem as if a doctor should have some protection. Everybody who has any dealings with the doctor charges him the limit. Everybody who engages the doctor's services goes the limit in deferring or evading payment, while such consideration as, for instance, not asking him to make calls at undue hours, before the doctor starts upon his regular daily round, or their needlessly molesting him outside of his office-hours, or studying to save him any other unnecessary trouble is one of the rarest of experiences in a practitioner's life. This is the way it goes:

Tom's wife is sick. Tom philosophically concludes she'll be better soon; he goes to his work past the doctor's office, comes home at dusk, to find her worse; eats his supper, smokes his pipe, then when sufficiently rested he pulls on his boots and goes for the doctor. When the bill comes, the man puts it aside; the regular living-expenses take nearly all his wages, and there have been extras; each time a little is saved there comes a whole host of needs—clothes, outing—and by and by that doctor's bill is forgotten. A man always has a choice of places to put in an extra ten; but, that is not reason enough for him to go gunning for the doctor when that long-suffering man at last rebels against the imposition and refuses his services.

There is something repugnant to humanity in a physician's refusal to go to the aid of anyone sick, of a sick child—but, Great God! did you ever try to realize what a frightful thing it is to be a doctor and to be unable to collect enough to pay for your living? Getting shabby; credit exhausted; professional material needed to do your professional duty; family-needs multiplying! We, most of us, know the story. It has driven men whose every fiber responds to the call of suffering, out of the active work of the profession.

And all this evil is, because we cling to the obsolete, archaic, absurd, flatly impossible fee-system.

Wake up! this is not the day when the doctor was an ordained priest and subsisted upon the offerings left at the temple of the gods. This is today; this is the day of science, of preventive medicine; it is the day when every human being has so much of duty pressing down upon him that he can not

afford to be ill. All that is needed is, simply so to alter our financial relations with the public as to adjust it with the customs and conditions now prevailing.

Let each family subscribe its yearly salary to the doctor, and then let him do his level best to keep them from getting sick. That's all.

What I object to is whin I pay tin or fifteen cents f'r a magazine expectin' to spind me evenin' improvin' me mind with th' latest thoughts in advertisin', to find more thin a quarter o' th' whole book devoted to lithrachoor.
—Mr. Dooley.

THE CONNECTION BETWEEN PELLAGRA AND VITAMIN

Now vitamin—that principle of food-plants of late acquiring such great prominence in biology, and first coming under notice in connection with beriberi—is being associated with that other obscure and mystifying malady, pellagra. Pellagra, it now is confidently asserted, can be cured, in its not too far advanced stages, merely by supplying foodstuffs rich in vitamin; and, further, the same diet possibly will obviate its appearance. This is the startling assertion of Casimir Funk, director of the department of physiologic chemistry of the Cancer Hospital Research Institute of London, as laid down in a contribution to the *Muenchener Medizinische Wochenschrift* of March 31. This is Funk's simple formula for the prophylaxis and the cure of pellagra, viz.:

In order that pellagra may not develop, it is necessary that only maize be eaten that has suffered absolutely no loss of substance of the kernel in its manipulation in preparing for food. In other words, none of the vitamin of the Indian corn must be removed by milling or otherwise. This injunction presupposes that a given family confines its dietary exclusively or largely to maize preparations, as in Italy and our southern states. However, whatever the general dietary may be, it must include articles rich in vitamin, more especially potatoes and garden-vegetables, the latter preferably uncooked. In this connection, Funk advises the popularizing of the potato (urging its culture or its admission, duty-free, to regions where maize is the staple), pointing out that pellagra is unknown in potato-zones.

The therapy is represented as equally simple, being the same as set down for prophylaxis; of course, provided the patient is not too far run down.

Ordinarily, the diet should be a generous mixed one, including plenty of fresh fruit, vegetables of all kind, meat, milk, butter, and, for carbohydrate, potatoes preferably. In advanced cases, fresh fruit-juices, vegetable soups, raw or merely boiled-up milk, and meat-juice and bouillon, liberally, are recommended. Medicinal agents would be, yeast and codliver-oil, both of which contain considerable vitamin. The oil has been prescribed, with success, by Nightingale.

Vitamin, it may be well to explain here, is a chemical body first isolated by Casimir Funk, of the Lister Institute of Preventive Medicine (London) and announced in 1911. (See *Trans. Soc. Trop. Med. a. Hyg.*, 1911, p. 86; *Jour. of Physiol.*, 1911, p. 395, and 1912, p. 75; *Lancet*, 1911, p. 1266; *Jour. State Med.*, June, 1912.) It is a basic substance of the order of the pyrimidine bases, and allied to uracil and thymine, and is believed to be a constituent of nucleic acid. It, forms colorless acidular crystals soluble in water. This principle has been isolated from the hulls of rice and maize, from potatoes, the legumes, yeast, milk, brain-substance, besides being present in numerous vegetables and fruits.

Funk, who has been devoting considerable attention to this and related problems for several years (as in part indicated by the bibliography just cited), considers the pellagra-question as now in the same stage in which that of beriberi was a dozen years ago —numerous theories are formulated, with the toxic and the infectious in the lead, the malady meanwhile spreading apace, but little, if any, energetic efforts at prophylaxis undertaken; the death rate, in the United States alone being put down at 40 to 50 percent, with 20,000 deaths in the period of 1907—'12. Then, asks this writer, shall we wait until our investigators have agreed upon the nature of this grave malady, or may we not already determine upon active preventive measures, based upon facts within our knowledge?

The key to the pellagra-problem, we are told, is found in the discoveries regarding beriberi: the conditions under which these two diseases appear are analogous. Indeed Funk has formulated a definite conception concerning four vexing trophic disturbances—beriberi, scurvy, rickets, and pellagra—and has coined for this group the expressive collective term "avitaminoses"; which is to say, pathologic states determined by depriving the organism of its needful vitamin. Another, more general, name he bestows upon this group is, "deficiency diseases." (Cf. the

brochure "Die Vitamine, ihre Dedeutung fuer die Physiologie und Pathologie, mit Berueck-sichtigung der Avitaminosen." Publisher: J. F. Bergmann, Wiesbaden.)

Immediately under the outer layer (the "skin") of rice, wheat, and Indian corn, there lies the stratum of aleurone cells, and this latter stratum, besides being rich in proteins, fat, and the mineral salts, carries the quite recently discovered vitamin—the basic, pyrimidinic principle vital to the plant already defined. The *starchy* portion of the grain does *not* contain any vitamin.

As to the connection subsisting between polished (and consequently vitamin-free) rice and beriberi, that is too well understood at present to call for further words; suffice that persons subsisting largely upon polished rice (or, also, upon sago or bolted-wheat bread) are liable to be attacked by beriberi, while feeding the rice-bran to these patients or reverting to an unpolished rice diet will effect a cure.

Now, according to Funk—who for several years has been a leader in the overthrowing of the toxicogenous origin of beriberi—there is a complete analogy between the etiology of pellagra and beriberi. Indian corn when milled is robbed of its peripheral aleurone layer, and with that of its indispensable vitamin. Then, if this preparation become the predominant article of food, an outbreak of pellagra becomes a probability.

But, how comes it that the malady appears of differing degrees of intensity in different countries; why is it more virulent in the United States than in, say, Italy, where the mortality is placed at round 4 percent, as against 40 to 50 with us? (As a matter of fact, it is now known to be much less than this in America—possibly 15 to 20 percent.)

For this puzzling fact Funk also offers a simple explanation ; namely: the extent of milling the corn varies with the localities, and is the most thorough in our own country. This has been proven by testing comparatively the corn-meals from various countries. Conversely, it is asserted by the author that bran of Indian corn, which is largely utilized as feed for live-stock, is known to augment the yield of milk. Incidentally he expresses the hope that collective observations as to the foregoing phase may settle this part of the problem.

In this connection, one other pertinent and applicable observation is here pointed out; namely: the greater the relative amount of rice poor in vitamin habitually consumed by an individual, the earlier the signs of beriberi will make their appearance. Consequently, the proportion of vitamin-free maize habitually eaten may be of importance. When it is pointed out that pellagra occurs among people (especially in the United States) who enjoy "good food," Funk also finds an answer: While, on the whole, pellagra is a disease of poverty (85 percent of cases, in America, being among the poverty-stricken), such well-to-do persons may habitually consume large amounts of decorticated-corn meal, the deficiency of which is not balanced by the other vitamin-bearing items of their fare, such as potatoes, butter, milk, fruit; when they may fall victims despite the "good" table.

Another thing, pellagra can not be a dietary disease, for, it is found also outside of the corn-zones, numerous instances and minor epidemics of this disease being on record where polished rice (and not maize) was the main item of food. But this need not militate against a vitamin-hypothesis, for the reason that, similarly, beriberi sometimes is caused by a diet of sago or white wheat bread. However, accurate statistics as to the exact nature of the complete dietary under the circumstances named are highly desirable, as pointed out by Funk.

While these views advanced by Funk largely are hypothesis, he finds corroboration from various sides; one of these being certain observations, recorded by Nightingale (physician to a large prison in Rhodesia, S. A.), concerning an epidemic of pellagra involving 1210 prisoners. Two kinds of corn-meal were at disposal: one being the whole corn ground in a hand-mill; the other, produced at a steam-mill from the decorticated grain.

The pellagra occurred exclusively in those individuals receiving the milled corn. On the other hand, the whole-grain meal not only did not give rise to the disease, but actually proved positively curative for the victims. This observation was definitely established, since several times the supply of the nonnoxious whole-corn meal gave out, so that the phenomenon repeated itself. No new cases would occur when the latter kind was regularly provided.

True, Nightingale termed the trouble "zeism," not venturing to consider it real pellagra, inasmuch as all the patients were cured, while, further, serious central nervous symptoms did not develop. Nevertheless, Funk is convinced to the contrary, the early change to a vitamin diet doubtless having obviated the graver lesions. Furthermore, in the almost complete absence of vitamin, the disease showed very rapidly—within a

few weeks—hence, the pathologic changes presumably would differ from those of the usual type. The latter cases, of course, come on gradually, chronically; for, under ordinary circumstances, there always enter into the diet smaller amounts of foodstuffs rich in vitamin—naming only potatoes and other vegetables, fruit, milk, and so on. When thus the malady has slowly crept upon the individual, month after month, and the victim becomes aware of his breakdown, many times it is too late to repair the damage to the organism.

If all that is beginning to be claimed for vitamin, or, rather, charged to its absence from our food, then numerous other interesting applications of the facts involved may be looked for. Thus, for instance, light may be thrown upon the startling spread of chronic maladies, the multiplication of cancer, and tuberculosis. There is little doubt that food is a much more important factor in the etiology of disease than most of us have been willing to admit.

Our old friend, Dr. C. S. Pixley, who has written on pellagra for this journal, lays great stress upon the dietary in this disease. He is convinced that the restriction of the food is the determining cause, and while he believes that protein starvation is the principal factor he has found that improvement almost invariably follows the adoption of a more generous dietary. As to methods of treatment and practical results, therefore, he is not so far at variance with Funk.

The medicinal measures now quite generally adopted, that is, the use of calcium sulphide and intestinal antisepsis, may well be associated with the vitamin-rich diet advocated by Funk. Good results are also said to follow the use of living Bulgarian-bacilli cultures.

We have but one life to live. We cannot make too much of it. The great danger is that we will fall short of what we might attain. But if we are careful to maintain our standards, they will help us to achieve commendable success.—J. M. Watson.

HAS THERAPEUTICS ADVANCED LESS THAN SURGERY?

I am moved by the recently staged bout in Paris to some reflections upon the philosophy of fighting and fighters, as applied to some other matters. The pugillist's ring is not a very refined subject of discussion in these days, it is true; nevertheless, it has always furnished, and still continues to furnish, a great deal of the current philosophy of life and not a little of its popular nomenclature; which is not surprising when we consider that, after all, the ring is the elemental prototype of life.

The particular reflection that is forced upon me just now is that every fighter has his day. That, you say, is a very trite reflection? Granted; however, I have not quite finished. I reflect, further, that the fighter's day really comes to an end before—sometimes a long while before—his rival comes along and puts him to sleep with a knockout blow.

By dint of three or four victories, such a man makes himself the world's champion, and establishes his supremacy in the minds of the ringside fans. Then, perhaps, for a long time no challenger appears, and our champion walks around enjoying his reputation, believing himself still to be a better man than any other one that puts on the gloves, thinking in his heart that nobody ever will subdue him. Even the "fans," in spite of all the warnings of history to the contrary, are hypnotized into believing the same; yes, the very man, in training somewhere, who is destined to whip him, shares the general obsession.

At last some ambitious lad ventures the rash presumption of challenging this champion; a bout is arranged; youth comes leaping into the ring, and the champion is made to take the count. Then suddenly it flashes upon everybody, even upon the defeated erstwhile champion himself, that in reality he has not been the best man for quite a long time. Looking back, one can almost put a finger on the time and place where his physical decadence began, which was bound to culminate in this knockout. And his backers come away from the pay-tables sadder and wiser men—until next time.

Now for the application. For many years, surgery has been cock of the walk. Medicine received its knockout blow in the middle of the nineteenth century when Pasteur and Lister and the rest of that immortal group established the infectious nature of "surgical fever" and showed the way to avoid it. Then it became easier and safer and more directly efficacious to operate than to treat internally; and surgery not only received a miraculous impetus in its own legitimate sphere, but, in the conceit of its new-found license, broke over into the domain of therapeutics and dominated the whole field of medicine.

From that time to this, the surgeon has been the supreme figure in medical practice. He has worn all the honors and received all the emoluments. And, for a while, it may be

frankly admitted, he was entitled to all that he got. For, the surgeon took admirable advantage of his position, and armed himself, so to speak, with modern, smokeless, range-finding weapons, while the internist was still blazing aimlessly away with a blunderbuss. He worked with certainty and exactness and knew his way, so that the patient could entrust himself to him even through the dark valley of chloroform and dissection. He followed a well-defined course and obtained equally well-defined results, such as had never before been known to medicine.

In every bout that surgery had with internal medicine, surgery got the decision, until internal medicine acquired the habit of taking the count, and the public developed a regard almost amounting to infatuation for surgery, and a corresponding indifference almost amounting to skepticism for internal medicine.

So, the challenging in a great measure ceased, and surgery strutted the sawdust, the acknowledged and uncontested champion. To this day, the surgeon holds his high, complacent position by virtue of this reputation. Surgery and its devotees—all but a few of the knowing ones—still fondly imagine that it is supreme.

But, in the meantime, a few "white hopes" in the ranks of internal medicine have quietly and earnestly been training to meet the champion—here and there a Wright and an Abderhalden and an Ehrlich and a Vaughan—and the truth is that surgery already is beaten.

Therapeutics is, at this moment, in advance of surgery. It has taken a leaf out of surgery's book, and has trained with exact methods and definite weapons. The theater already is set for the struggle between medicine and surgery, and surgery is doomed to defeat. Exact biologic medicine will deliver to surgery the knockout blow, just as exact aseptic surgery made medicine take the count fifty years ago.

The day of therapeutics is at hand. Its hour has struck. Already it is taking cases out of the surgeon's hand. It is pushing the surgical index further and further back toward the vanishing point.

I have said, biologic medicine is doing this. I do not mean alone the socalled biologics, the serums and vaccines and hormones, although I mean them too. I do not speak so much of remedies themselves, as of our methods of applying them. And this refers equally to drugs. There never was a time when drugs were used so intelligently and so effectively; and they are being employed more and more on the same rational, biologic principle with serums and vaccines, namely, that of synergizing the offensive and defensive resources of the body itself.

I do not intend to imply, of course, that surgery has lost, or ever will lose—at least not in our day—its place of usefulness. Nay, I am not even suggesting that surgery has lost any ground; on the contrary it is far better and more scientific than it ever was. Its relative status with medicine has changed, that is all. Internal medicine simply has overtaken it and is traveling faster.

The future—at all events for the next half-century—lies with internal medicine. It is time, aye, high time, that the old obsession which still lingers in the minds of the profession and the public by the impetus of past reputation, that surgery and pathology are farther advanced than therapeutics, should be denied and banished. It is no longer true.

Therapeutics has its hat in the ring. In a year or two, the referee will publicly hold up its gloved hand. Do not be fooled by the glamor of the past. Bet your money on therapeutics.

All lies you may avoid but the Lie Direct; and that you may avoid, too, with an If. I knew when seven justices could not take up a quarrel, but when the parties themselves were met, one of them thought but of an If, as "If you said so, then I said so," and they shook hands and swore brothers. Your If is the only peace-maker. Much virtue in If.—Shakespeare.

NUCLEIN IN DEMENTIA PRÆCOX

We regret the lack of space in CLINICAL MEDICINE to give a full report of the meeting of the Alienists and Neurologists held in Chicago under the auspices of the Chicago Medical Society. One of the most interesting of the many interesting problems discussed was, dementia præcox. On Tuesday afternoon, July 14, four papers of special interest to the students of this disease were read; namely: "Dementia Præcox," by Dr. H. A. Lindsay, of Independence, Iowa; "The Abderhalden Test in Dementia Præcox," by Albert E. Sterne, of Indianapolis, Ind.; "Dementia Præcox in the Last Two Years: Diagnosis and Treatment," by Dr. Bayard Holmes, of Chicago; and "The Demonstration of the Abderhalden Test in Dementia præcox," by Dr. Adolph Gehrmann, of Chicago.

There was an exceedingly interesting discussion of these fine papers. While there

was considerable difference of opinion as to the exact diagnostic value of the Abderhalden test, there was general agreement that it was likely to prove of extreme practical value in the diagnosis of early and doubtful cases. Doctor Sterne's review of the literature upon this subject was the most complete that has ever come to our attention and bore witness to the enormous amount of work now being done in this field.

Naturally, we are much interested in the treatment of dementia præcox. While there was considerable difference of opinion as to the value of nuclein, we were struck by the apparent fact that those who had the largest experience with the remedy had the most faith in it. Practically all admitted that decided amelioration often, if not generally, follows its use. Probably a majority were of the opinion that the benefit secured was not permanent, although several reported what seemed to be clinical cures.

One of the most interesting contributions to the discussion was that by Doctor Sawyer, of Marion, Ohio, who gave his experience with nuclein, first alone and later combined with other remedies in the Lundvall solution (described in a previous issue). Doctor Sawyer has been struck by the rapidity with which the acute mental disturbance of dementia præcox often clears up after the administration of a dose of this remedy. He has seen a complete change in the mental condition a few hours after the injection. In one case in which this remedy was employed, there seemed to be a cure, the patient some time ago being discharged apparently well and having remained mentally sound thus far. Out of eight persons treated with nuclein, six have responded favorably.

The alienists present at this meeting generally showed great interest in these reports, and there is good reason to believe that nuclein will be given a generous trial in many institutions for the insane during the next few months. We shall watch the reports with intense interest.

BUGS AND FLIES: THE RUIN THEY WORK

I detest a fly. I abominate a roach, and loathe a bug. A few years ago a jocular friend, observing the assiduity with which I wielded the then-novel fly-swatter, remarked that my epitaph should be: "He flew high, and swatted the fly."

Well, as usual, the world is trailing along about twenty years after us, and the dangers of insect infection are beginning to be appreciated. Now comes Doctor Nelson Du Val Brecht, late of the United States Public Health Service, with a heavy indictment of the bug.

Sixteen orders of insects, Doctor Brecht writes in *The Washington Star*, contribute to torment mankind; in addition to the vermin, which include rats, mice, bats, ticks, spiders, and so on. One of the most vital problems today is, how to deal with these pests. It is estimated that the fly costs the United States annually $350,000,000 and 170,000,000 years of human life! The annual loss from tuberculosis is 50 million dollars; from typhoid fever, 70 millions; from intestinal diseases, 97 millions.

The yellow-fever epidemic of 1878 cost the Mississippi Valley 15 millions; but each year the cottonball weevil takes 108 million dollars from the pockets of Alabama, Georgia, Tennessee, and Florida. Fifty-one counties in the South contributed 3½ millions' worth of cattle to feed ticks. In 1874, locusts grafted 40 millions from Wyoming, Montana, and the Dakotas. The ox-warble fly takes 20 millions a year. Summing up, we Americans lose on our crops 520 million dollars a year through insect pests.

The female bedbug transmits to her victims relapsing fever, bubonic plague, kala-azar, smallpox, typhoid fever, infantile paralysis, tuberculosis, leprosy, and probably other diseases also.

The cockroach carries typhoid fever, bubonic plague, and possibly cancer. Typhus is spread by body-lice; Rocky-Mountain spotted-fever, by infected ticks; bubonic plague, by the flea; the sleeping-sickness of Africa, by the tsetse fly. Sambon asserts that in Egypt pellagra is transmitted by sand-flies; surra, a cattle disease of the far East, comes through the stable-fly; Texas cattle-fever is transmitted by infected ticks while the nagana of the Pampas and dourine of Mediterranean coasts are carried by varieties of the glossina, of which the tsetse is one.

Ants are sometimes venomous and some varieties destructive to woodwork. The potato-tuber moth has joined the potato-bug in assaulting Paddy's standby. The timber-beetle destroys as much timber as forest fires burn. The green wheat-fly, alfalfa-weevil, locust-leaf blight, fruit-fly, browntail moth, gadfly, current- and mustard-mites, gipsy-moth, oilfly, wasp, caterpillar, and innumerable other insects take heavy tolls from civilization. The codling moth and

San Jose scale are to be repelled only when the different states join forces for organized warfare against them.

Added to all of this, hawks and coyotes take our chickens and render it impossible to raise geese, ducks or turkeys in some sections. Ground-squirrels go along the rows of corn and dig up every grain. Rabbits debark and kill the fruit-trees.

And of all the forms of animal life that prey on man, from the tiger to the cobra and on down to the tiniest protozoon and bacillus, the common housefly is most deadly.

We are literally eaten up by flies.

Swat the fly! Set traps outside for him; feed him to the chickens; screen your house. Cover up all manure in which the she-fly breeds.

Again I say—Swat (or otherwise eliminate) the fly!

And my dream is this, that as the years go on and the world knows more and more of America, it also will bring out this fountain of youth and renewal; that it will also turn to America for those moral inspirations that lie at the base of human freedom; that it will never fear America unless it finds itself engaged in some enterprise inconsistent with the rights of humanity; that America will come to that day when all shall know she puts human rights above all other rights and that her flag is the flag not only of America, but the flag of humanity.

—Woodrow Wilson.

EDUCATIONAL FREEDOM

There is still enough of the spirit of priestcraft about medicine to remind us that the priest and the physician originally came from the same stem; that is to say, this spirit still lingers about the art of medicine. For, in these latter days medicine has undergone a distinct split: part has become a science, and a decidedly inductive science at that; part remains an art.

So far as it follows the career of a science, of course, medicine is absolutely democratic, nonsectarian, openminded, welcoming truth from whatever source it may come, arguing only to impart light or to receive it. In its capacity as an art and craft, to be sure, it has been greatly influenced by the scientific element, and is a hundred times more liberal, tolerant, openminded than it formerly was. But around this phase of medicine there still lingers enough of the medieval sacerdotalism to hinder its progress from keeping pace with the other.

There still persists a disposition on the part of the powers that be, as with the priesthood of the middle ages, to maintain the closed book, or at least to permit only their own censored portions and their own inspired interpretations to be dealt out. True, it is not called priestcraft in these days, but paternalism. But, paternalism, stripped of its euphonism, usually turns out to be either political despotism or religious tyranny. It is for the good of the order and for the public protection. To be sure, that was the plea of the medieval priesthood, and it has been the plea of all religious and political assumption in all ages. There is no compulsion or restraint laid upon the modern physician, either in his beliefs or in his conduct. Ostensibly, no; but, actually, his therapeutic course is rigidly prescribed and proscribed for him by constituted authority, and wo be to him who transcends the prescribed course or trespasses upon the proscribed one. If any man shall add unto these things, the powers that be shall add unto him the plagues that are written therein; and, if any man shall take away from the words of the book of their prophecy, they shall take away his part out of the book of life.

Especially is this sacerdotal censorship and proscription exercised anent the educational aspects of medicine, at the gateways of the profession, in the schools where young men and women are being trained for medical practice. Naturally. Priestcraft knows its business, and thoroughly understands that if it can catch and mold the receptive mind of the novitiate the full order may safely be trusted to follow its leaders. So, it carefully and rigidly formulates—does this present-day medical priestcraft—the metes and bounds of therapeutic teaching to be observed in medical schools, and sharply limits them with the peremptory dictum, "thus far shalt thou go, and no further."

That is to say, it tries to do so. Happily for medicine, this is not the middle ages, but the twentieth century, whose public conscience has awakened to the fact that the only effective way to the best and highest efficiency, both in thought and in conduct, is through mental and moral freedom.

To open the mind to everything that holds the promise of value and helpfulness; to hear all, to weigh all; to exercise an unbiased judgment, neither rejecting the good because it is old nor refusing it because it is new; above all, to do all this discriminating with one's own untrammeled mind and in fair view of all the premises—these are the twentieth-century ideals of education and training, in whatever line, to make for progress and efficiency. And, in spite of the efforts of the

medical hierarchy to restrict and prohibit educational freedom, these are the principles which will prevail in the schools of today, and of tomorrow, and of the day after tomorrow.

But, say our hierarchical friends, these young, untutored minds are not capable of discriminating between the good and the bad, the false and the true. They must be led and guided and their judgments "formed."

Again the cry of the old religious priestcraft! A specious and misleading argument, to which every canon and method of modern education gives the lie.

How shall judgments ripen at all, how shall progress come, if minds in their formative period are crushed into a mold, and released only when they have set into unchangeable forms?

It is true the young, untutored mind does need intelligent leading and guiding; but not forming. The twentieth-century answer to the demand for guidance is, to open all the doors of data and of information; to present the facts, all the facts, the true, unbiased facts; and, above all, to teach the seeking mind to draw its own unprejudiced conclutions from the facts.

There is no reason whatever why the young, developing mind should not receive and exercise itself upon the facts in this full, untrammeled fashion; on the contrary, there is every reason why it should, and in every department of knowledge and practice modern education is following this very method. This is, in fact, the distinguishing mark bebetween the old education and the new. Tell the young man and woman everything; keep nothing back. Youth is the very period of trial and error; and the wider and larger and more fearless the range of its exercise of this trial-and-error process, the truer and sounder the judgments it will form.

Applying this truth to medical education, there is no reason why the medical student should be wrapped in intellectual cotton-batting and carefully shielded from contact with everything that happens to be new and unconventional and thought-provoking in his craft. Again this subtle distinction between the art of medicine and its science—one might almost say between therapeutics and every other branch of medicine.

In its scientific phases, and even in surgery, no such paternalism is practiced. No one regards it as out of the way for a surgical instrument house to call the student's attention to a line of surgical instruments, whether they happen to be in agreement with the teaching of the professor of surgery or not. If the instruments are of any value, the student has ample means of finding it out; and, if not, he has ample means of finding that out, too. That is what he is in school for. But, if a pharmaceutical firm submits to him its products, and undertakes to tell him someth'ng about them, then, unless they be "written in the words of this book," the student is being "debauched" and "polluted."

However, we do not believe that the modern medical student, unless we have greatly mistaken his temper, will permit himself to be thus swaddled and swathed—with a few timid, servile exceptions. As a friend of ours recently remarked, a medical college is not a convent. On the contrary, it is a place where young men and women, of presumably capable minds, are being trained for a definite, practical work—and not an exclusive, safe-conducted work either, but a man's part of the world's work, where competition is stronger and fiercer than even in the commercial sphere; not the competition of profits and losses, but the higher competition of results in life and health.

Under these circumstances, it is not alone the medical student's right, but it is his positive duty to open his eyes and ears and mind to everything that holds the promise of help, and to bring to the question of therapeutic agents precisely the same exercise of his faculties that he brings to matters of scientific research.

PROFESSIONAL LETHARGY: ANOTHER PREACHMENT

In our June number we published an editorial entitled "Our Lethargic Profession: How Can We Wake It Up?" This editorial has created a good deal of comment. In the Miscellaneous Department of this issue we are printing some of the many letters upon this important topic that have been received. These comments show a surprising diversity of opinion regarding the causes of our various economic troubles. Plans for the future are few and chaotic. Apparently at sea most of us are, though we generally are agreed that we ought to do something before "the deluge" of economic stress is fully upon us.

Nearly every doctor whom you interrogate will agree with us that, from a business point of view, the medical profession is sick and that some kind of remedy is needed; but, there are few who have any definite remedy to offer. All of which proves that what is needed more than anything else is an intelli-

gent study of the situation, through interchange of opinion.

Among the comments upon our editorials, we were particularly interested in one which appeared in *The Medical Economist*, of New York. *The Economist* thinks that CLINICAL MEDICINE is "just a bit unfair for not having a word to say about the work being done by *The Medical Economist.*" It reminds us of the time when we were poor and fighting against odds and when we were calling upon every physician to help us secure fair play; and it assures us that it—*The Economist*—did help us at that time. It, further, declares that "CLINICAL MEDICINE is getting fat, and forgets; that it now attempts to steal the winds from our [its] sails."

Now! Now! We certainly are not trying to rob *The Medical Economist* of any of the credit due it for its strong fight in behalf of the medical profession. We have watched with interest the efforts which the earnest editorial corps of our contemporary has made to arouse the medical profession to a realization of the problems now confronting it. In this fight we are doubly—trebly—glad to wish it godspeed; because, forsooth, we but too well know what this fight means, having been "in the thick of it" years before *The Economist* was born! If we can help *The Economist*, we are with it, and glad to feel that it is with us.

Right here and now we urge every reader of CLINICAL MEDICINE to subscribe for *The Medical Economist*—at least to send for a sample copy. This monthly is published at 302 Broadway, New York, and the subscription price is $1.00 a year.

In one respect, our work differs from that of *The Economist:* the special fight of our contemporary is against dispensary and charity abuses; our fight, we feel, is broader far than that.

Thus, on our part, we are interested in the city physician, but so are we in the country physician, and the country physician has problems to solve that are not less important than those confronting the city practitioner. Among these problems, for instance, is the maintenance of his legal right to dispense his own remedies if he so desires; this, to him, is one of the problems of greatest importance. On the other hand, it is a problem that interests the city doctor only a little, and, if we can judge by the pages of *The Economist*, some of our New York city brethren show a disposition to surrender without battle the rights of their country brethren, in order to secure the support of the druggist in their own peculiar fight against the dispensary evil.

We believe the medical profession should be a unit in matters economic as well as in professional matters. This movement of ours will not succeed unless we take into consideration all the problems which concern the medical man, be he in city or in country, and deal with them in a broad-minded, generous spirit of cooperation.

So, then, if we may make one suggestion to our brethren of *The Medical Economist*, it is that it reach out for the support and the interest of *all* American physicians—there is a considerable stretch of country to the west of the Hudson! If our contemporary can evolve a satisfactory plan for the organization of the entire medical profession along defensive lines, it assuredly can count upon our whole-hearted and disinterested support, besides that of thousands of doctors to whom *The Economist* is only a name and "economic clubs" are an unknown and unrealized abstraction.

Meanwhile, the whole topic is still open for discussion in these pages.

One day a patient called on the late Dr. James Murphy of Sunderland, and said that he had already been to one of his rivals. Doctor Murphy replied, "I have no rivals; which of my friends was it?" The curse of medical life is the jealousy which keeps men looking on each other as rivals. Get rid of it, and you and your neighbor will be happier and not poorer men.

—Dr. R. C. Buist.

THE "AMERICAN MEDICINE" GOLD MEDAL

Every year *American Medicine* confers upon some American physician a gold medal, in recognition of conspicuous and noteworthy service in the domain of medicine and surgery during the year.

This year the trustees having in charge the assignment of this medal conferred it upon Dr. George W. Crile, of Cleveland, Ohio, whose notable work in the study of shock, and especially in the elaboration of his well-known theory of anociassociation has been one of the most brilliant contributions to surgical knowledge which has appeared for a number of years.

We extend our congratulations to Doctor Crile, as well as to the journal which has done him this signal honor. Of not the least significance to us is the fact that one of the essential factors in the technic of anociassociation is the use of scopolamine-morphine.

Leading Articles

Feeding and Housing the Veterans

Another Story of the Gettysburg Reunion

By RICHARD SLEE, M. D., Swiftwater, Pennsylvania

First Lieutenant, Medical Reserve Corps, United States Army; Chief Sanitary Officer, Third Division, Veterans' Encampment, Gettysburg, Pennsylvania

EDITORIAL NOTE.—Nearly a year ago, in our September (1913) number of "Clinical Medicine," Doctor Slee told the story of the medical side of the great veterans' encampment. This month he lets us behind the scenes again, giving special attention to the work of the Quartermaster's Department of the Army at Gettysburg, under the brilliant supervision of Major Normoyle of the United States Army.

IN THE September (1913) number of CLINICAL MEDICINE, it was my pleasure to present a brief article covering the medical aspects in connection with the great veterans' reunion on the battlefield of Gettysburg, in celebration of the fiftieth anniversary of that epoch-making event. I am reminded of the flight of time by the fact that in this month occurs the first anniversary of the fiftieth anniversary of the battle of Gettysburg.

With this fact in view, and likewise with the eyes of the entire nation centered upon our distressed and disturbed neighbor, Mexico, and with an army of our khaki-clad boys actually holding possession of the city of Vera Cruz and patroling the hundreds of weary lonesome miles along the Texas-Mexican border, I feel that it may not be out of place, and that, in fact, it may be of interest to our many readers to hear something of the other side of army work than that covered in my brief report on the work of the Medical Corps and the Medical Reserve Corps at the great Gettysburg camp.

The strength of an army depends very largely—indeed, we may say entirely—upon the condition of health in which both the officers and men are maintained. Throughout history, disease has killed and disabled infinitely more men in a campaign than all other agencies combined. The actual battles, with their slaughter and maiming, are dreadful enough to consider; but one is apt to overlook the terrific suffering and loss of fighting-strength from infectious and contagious diseases which in the past has followed all campaigns. Not only do we lose the actual fighting-value of the man who is sick, but each man sick or disabled requires attention, and this means an interminable train of nurses, orderlies, and assistants of various description, and an immense amount of tentage and other supplies. We need but refer to the Spanish-American War, with its history of over 20,000 cases of typhoid fever and its mortality of a trifle over 250 killed in action, to show what conditions were even at this comparatively recent period.

We have had encamped along the Mexican border for several years an army of men free from typhoid fever. Our army in Vera Cruz, as well as the brave bluejackets and marines on board the warships, are also protected. Therefore, in spite of the fact that nineteen of our brave boys laid down their lives in the actual fighting necessary to secure control of this seaport, the medical departments are not overwhelmed with an immense body of sick and diseased men, as they would have been by this time under former conditions.

I repeat the phrase, "War is hell." Of this there is no question, but the American army, and in this I include all branches of the service, has done more in the last decade to minimize the "hellish" side of conflict than all other nations of the world combined. There is no army composed of braver officers and men. There is no nation in which the individual soldier has more initiative, gumption, and pluck. There is no army better fed and better clothed, for its size; nor would there be any army better equipped with arms and ammunition and more thoroughly trained, were it not for the fact that our representatives at Washington, for some reason hard to fathom, are unwilling to grant to our military authorities the necessary financial support to carry to conclusion the military plans that

have been carefully and painstakingly worked out by the various departments.

The Gettysburg Camp a Great Object Lesson

The great camp at Gettysburg gives us an idea of what can and will be accomplished by other departments, outside of the Medical Corps, in the event of conflict and the mobilization of a large army. My privilege of being a participant in this event is one which I will never forget. Although familiar with our larger maneuvers and campaigns of recent years and with many of the details of military life, I can never forget the impression made upon me on approaching this great camp at Gettysburg on the 28th of June, 1913. I do not think the feelings of a small boy on his first visit to the circus could in any wise approach mine on my first view of this encampment. Entering the camp, by way of Long Lane, from the town of Gettysburg, there was spread out before me an immense city of tents. The day was beautiful, few of the veterans had arrived, and this immense canvas city was somewhat quiet and free from the dust which became rather annoying later on.

The reader will probably be interested in looking over the official map which is here reproduced. This great camp was located in the heart of this battlefield, Confederate Avenue bounding it on one side and the Emmettsburg Road on the other. It was divided into four sections, as indicated on the map, and each little dot as it appears upon this reproduction represents a pyramidal tent, with accommodations for from eight to ten men. In addition to these tents for the men, there were large numbers of kitchens, latrines, various headquarter-tents, hospital tents, as well as headquarters for the many officers occupied in various capacities.

"Teamwork" Was Employed

In my previous article, I confined my remarks very largely to the results which had been obtained by the Medical Department in the handling of the various medical problems of this, the greatest, camp that has ever been assembled on the American continent. We of the Medical Department have a just right to feel a pride in the results obtained by our labors; still, one fact must not be overlooked, and that is, that the work of the Medical Department could never have been carried out to its successful issue had it not been for the splendid *teamwork* of all of the officers detailed in various capacities.

There was a time in the history of our Army, as is still the fact in many other armies, when the line-officer looked down upon the medical man and treated his suggestions with indifference or scorn.

In our country, this day happily has passed. The line-officer realizes that the fewer men he has to carry in the hospital or on "sick report," the more efficient and reliable is the fighting-machine. He has come to realize, and to appreciate in a generous spirit, that the medical officer of the United States Army is a trained sanitarian and a specialist in those matters which contribute to the maintenance of a sturdy fighting-force, and as a result a most hearty spirit of cooperation has been shown by the fighting side of our army in accepting the advice of the medical side. In fact, there is no army in the world today in which the medical department has as much authority, power, and standing as in the United States.

As showing the appreciation of this fact, I quote the following telegram sent from Vicksburg, Mississippi, April 18, 1913, to the chief of staff, in anticipation of the establishment of the Gettysburg camp:

> With the approval of the Surgeon-General, request that Major P. C. Hutton, Medical Corps, be detailed as sanitary officer for the proposed camp, Fiftieth Anniversary, Battle of Gettysburg, and that he be directed to report to me at Chief Quartermaster's Camp for instructions. Hutton is now with me at these headquarters. From present indications, he should be available for duty at Gettysburg after the first. I am in touch with Major Grove at Gettysburg.
>
> (Signed) NORMOYLE.

To show that the intentions of this line-officer, Normoyle, were true and genuine, I quote from his report as follows:

> I was very anxious that Major Hutton should be assigned to this duty, as I had fully discussed with him matters pertaining to the proposed camp. Having served with him in San Antonio, in 1911, and again on the flood work, I was well acquainted with his immense ability and capacity for hard, driving work. At Gettysburg, he not only sustained his reputation but added to it.

This is certainly a most generous tribute from a line-officer to one of the Medical Corps. I can confirm Normoyle's remarks as to Hutton's ability. As chief sanitary officer of the Third Division it was my very good fortune to be directly under Major Hutton's command, and I can testify—by the loss of several pounds in weight and from the further fact that we slept on an average less than four hours out of the twenty-four during the period of this camp—to his capacity for hard, driving work.

In the organization of this great camp, the War Department had detailed Major J. E.

MAJOR J E. NORMOYLE
Quartermaster's Department, U. S. Army

Normoyle, of the Quartermaster Corps, as commanding officer, under whose direction this great camp should be built. Major Normoyle was then filling a similar position in the midwest in looking out for the quartermaster stores during the period of the great flood occurring in April of 1913, and his reputation was firmly established. That the War Department made a proper selection is unquestioned, as is shown by the resolutions and the many testimonials that have poured in upon him, not only from this country, but from others. In fact, it is freely acknowledged by foreign military observers as well as our own that the planning and organization of this great camp was really one of the most efficient pieces of quartermaster-work that ever has been performed in the civilized world.

Credit for the success of this great organization must be accorded to Major Normoyle. It would not be fair to say that it was owing alone to his efforts and work, inasmuch as he had associated with him a body of efficient officers from many other departments, who one and all worked with tremendous energy and without ceasing during this period; nevertheless, in the very largest measure, the credit is due to Normoyle for his ability to

Major Normoyle and his staff at the Gettysburg Camp

secure the cooperation and the enthusiastic teamwork of his assistants, and I for one am very happy to pay this tribute, as from a medical officer to one of the line.

The bearing which this great camp at Gettysburg has upon our present relations with Mexico is, of course, as a demonstration of what our army executives can accomplish in the care and welfare of our fighting force. The camp at Gettysburg was built to accommodate 40,000 veterans, whereas in reality on some days as high as 60,000 persons were within its borders. The only means by which these men could be transported into camp was by a single-track railroad running diagonally through the camp space.

When we realize that over 25,000 aged, infirm, and in many cases prostrated veterans were brought into this camp and detrained safely, and this without a single accident, within a period of twenty-four hours, we can readily see how rapidly a mobile force of young, disciplined men could, under similar unfavorable conditions, be poured into opposing territory.

The Immense Amount of Supplies Needed in a Great Camp

It would be impossible in an article of this limited scope to cover properly the amount of tentage, stores, and the numerous other appurtenances demanded for the proper maintenance of such a host of men. For this reason, I have merely abstracted a few of the most important items from the report of Captain H. F. Dalton, who was one of Major Normoyle's assistants and property-officer of this camp.

Blankets	105,262
Cots	44,850
Tin cups	40,001
Lanterns, candle	11,350
Plates, enameled	50,000
Tents, pyramidal	6,062
Bacon, pounds	27,575
Beans, pounds	18,705
Beef, fresh, pounds	79,742
Eggs, dozen	24,930
Flour, pounds	130,048
Potatoes, pounds	186,202
Sugar, pounds	60,000
Tomatoes, fresh, pounds	13,248
Turnips, pounds	10,755
Wood for incinerator, cords	720
Coal, anthracite, pounds	18,000
Hay, pounds	247,321
Ice, pounds	12,669
Lumber, feet	216,676

It should be remembered that these immense quantities of stores, many of them of a perishable character, were handled over this same single-track railroad, just mentioned,

without interfering with the movement of the veterans.

To appreciate the almost uncountable number and variety of details which must receive attention in handling great bodies of men, it is absolutely necessary for one to be present and observe personally such an event; while in a brief article of this character, it is impossible, of course, fully to cover the field. Even when right on the ground, one can scarcely realize the immensity of a project of this kind.

To begin, however, at Gettysburg wells had to be dug and water piped to all sections of the camp. And not only this, but sanitary fountains were introduced at frequent and convenient intervals; and even such details as the arranging of coils in pits beneath these fountains wherein ice could be stored, in order to cool the water for these veterans, were thought of. Postoffices, telegraph stations, and telephones all over the camp, electric lights, in fact, a thousand and one details that would go to make up a city many years growing were in evidence.

How many of the readers of CLINICAL MEDICINE appreciate the difficulties involved in feeding a great city-full of aged men, all

assembled virtually in two days and within a week to be returned to their respective homes near and far. Remember that not only the food, but the tables, cutlery, cooking utensils and stoves had to be ready and in place, and the cooks and their helpers assembled and prepared to do their work smoothly, and that anything overlooked in these arrangements was certain to bring on criticism. To me, familiar as I am with reasonably large undertakings of this kind, it was almost overwhelmin to gsee and appreciate what can be accomplished in an emergency.

That the difficulties were fully appreciated and every provision made in advance for prompt and efficient service, is shown by the following official orders issued by Major Normoyle:

OFFICE OF THE CHIEF QUARTERMASTER
FIFTIETH ANNIVERSARY, BATTLE OF GETTYSBURG,
GETTYSBURG, PENNSYLVANIA

Memoranda and instructions for the guidance of chief cooks and their assistants, June 28 to July 5, 1913.

1. The object of your employment in this camp is, to assist in the care of all the veterans of the Civil War who may come to this reunion.
2. These distinguished veterans average seventy years of age, and every courtesy, consideration, and attention possible should be shown them.
3. The camp is divided into four sections for purposes of administration. A quartermaster sergeant and three noncommissioned officers and such assistants as may be necessary being assigned to each section.
4. There will be several camp telephones in each section and a noncommissioned officer on duty in each.
5. The chief cook will be held responsible for everything pertaining to his kitchen, the care and proper handling of rations and protection of all supplies and the economical use of fuel.
6. Kitchens will not open for cooking purposes until ordered. Instructions will then be issued governing the approximate number of veterans to be taken care of.
7. Plates, cups, knives, forks, and spoons will be collected by kitchen-men promptly; washed and dried and assembled in the kitchen after each meal.
8. Tables must be kept immaculately clean. Quiet and orderly conduct must prevail at all times in kitchens. Any disturbance or annoyance should be reported to the noncommissioned officer in charge of section, without delay.
9. Any discrepancy or shortage in rations or other irregularity of like nature should also be reported immediately. Any pilfering of kitchen supplies of any character will be immediately reported and the offender will be summarily prosecuted.
10. The pyramidal tent nearest each kitchen is assigned for use of cooks and help.
11. All refuse from kitchens and dining-tables and all other waste material will be burned in the kitchen-incinerators.
12. All dishwater will be evaporated by pouring it into the shallow end of the kitchen-incinerators. Cesspools by kitchens will not be used, except by special order of the sanitary officer.
13. Use water very sparingly, remembering that it all has to be evaporated. Pour no water containing grease upon the ground.
14. All cooks and cook's assistants will be required to keep themselves neat and clean.
15. The use of profane and vulgar language about the kitchen will not be tolerated.
16. Ground about kitchen must be kept clean and free from all particles of food, trash, and rubbish.
17. Any orders or instructions from noncommissioned officers must be obeyed without question, and immediately.

J. E. NORMOYLE,
Major, Q. M. Corps, U. S. Army,
Chief Quartermaster.

Just to show you that the veterans were well fed I may be permitted to give you the menus of the meals for one day. These illustrate the care taken by our Army men to assure the welfare and comfort of these old soldiers of the Civil War. How many of these men, do you suppose, are better fed at home?

DINNER, JULY 3, 1913, 12:00 TO 1:30 P. M.
Estimated number of guests, 40,000

Beef steak
Boiled onions
Baked sweet potatoes
Apple pudding
Fresh bread, hard bread, butter, coffee, iced tea, sugar, salt, pepper, vinegar

SUPPER, JULY 3, 1913, 5:30 TO 7:00 P. M.
Estimated number of guests, 40,000

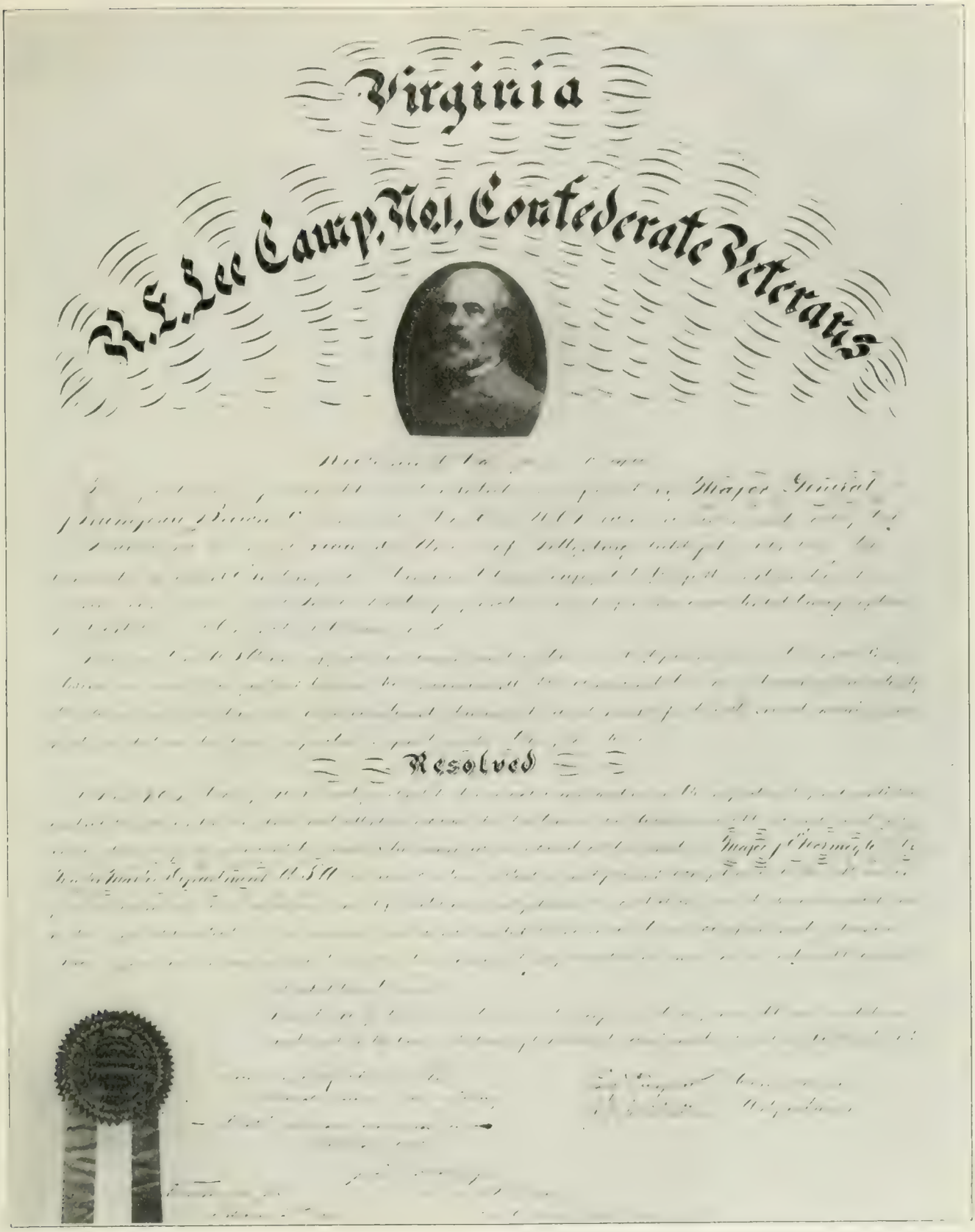
Baked pork and beans
Pickles, cucumber
Rice fritters
Fresh bread, hard bread, butter, coffee, sugar, salt, pepper, vinegar

NOTE: Pork and beans will be served three times, but the first time will be at supper June 30th, when but a portion of the veterans will be present here, and the third time will be for dinner July 5th, when a majority will have departed. This is the only meal at which pork and beans are served when all the veterans will be present.

BREAKFAST, JULY 4, 1913, 6:30 TO 8:00 A. M.
Estimated number of guests, 40,000

Puffed rice
Fried eggs
Fried bacon
Creamed potatoes
Fresh bread, hard bread, butter, coffee, sugar, salt, pepper, vinegar

And here let me say, what we did for the veterans at Gettysburg, we can do for our soldiers in the field. No one deprecates warfare more than do I, and I hope and trust that many years may elapse before this country is again engaged in actual conflict; nevertheless, it is a pleasant thought to know that in the



Resolutions passed by the Confederate Veterans

event of such an unfortunate occurrence our men will be properly provided for and will be spared many of the sufferings and hardships that heretofore have followed active military operations.

The Testimony of a Foreign Observer

As an illustration of the interest with which the assembling of the veterans was followed by those understanding the significance and importance of a great "experiment" like the establishment of the great Gettysburg camp, I quote herewith from a letter contributed to *The New York Times:*

To the Editor of *The New York Times:* Will you permit me, as an impartial English visitor to the recent camp at Gettysburg, to express the opinion that the editorial in *The New York Times* of today's date, paying well-deserved tribute to

the arrangements made for the comfort, health, and convenience of the veterans, was extremely well-timed and the words of praise most emphatically deserved? In Egypt and South Africa, and also in Germany, France, and England, I have had some experience of military camps, both standing and temporary, and have learned to appreciate the truth that only the most satisfactory results can ensue when the sanitation of the army and general administrative staff work heartily together, as was the case at Gettysburg.

Hitherto I have held the opinion that the great annual encampment at Bisley, England, in which regulars and volunteers cooperate, had achieved highwater mark as a temporary camp; but, all things considered, I must now yield the palm to historic Gettysburg in 1913. The death-roll at the camp for the week was nine veterans, all due, not to heat, apoplexy—which one might have expected in view of the torrid weather conditions which prevailed the greater part of the week—but to natural causes.

The army surgeons told me at Gettysburg that they attributed the health of the veterans to three causes: first, to the survival of the fittest, as represented by the sturdy old warriors then under canvas; second, to the stimulating effect which ensued when the same veterans revisited the old battleground and saw once again so many old comrades—a psychological factor of undoubted importance; and, thirdly, to the excellent sanitary arrangements.

The last reason might well be placed first. Gettysburg camp was certainly a credit, not only to the army surgeon, but to the military organization of the United States, which made the camp practicable.

(Signed) Percy S. Bullen.

New York, July 7, 1913.

[Mr. Bullen is the correspondent of *The London Telegraph*.]

The old soldiers were loud in praise of the provisions made for their comfort. Both the Grand Army of the Republic and the Confederate Veterans passed resolutions or issued general orders thanking the army officers for the care with which their comrades at Gettysburg were looked after.

I will quote from General Orders, No. 7, Grand Army of the Republic (see below), and attach a reproduction of resolutions passed by one camp of Confederate veterans:

GENERAL ORDERS NO. 7

1. The Gettysburg celebration was held July 1 to 4, as announced, and was a grand success from every point of view. It is estimated that more than 50,000 veterans were in attendance. The United Confederate Veterans were largely represented and took an active part. Your Commander-in-Chief and Bennett H. Young, Commander-in Chief of the United Confederate Veterans, spoke from the same platform at the first meeting on the first day, July 1, 1913, and gave the keynote of welcome and patriotism which permeated the whole celebration. The utmost harmony prevailed throughout the celebration. The "Boys in Blue" and the "Boys in Gray" fraternized together as though they had never been engaged in warfare against each other, and parted the best of friends.

The declarations of attachment to the Union and the flag by the speakers and members of both organizations were universal. The walls of prejudice and enmity, if any had existed, were broken down and each army vied with the other in patriotism and friendliness. The good results of this meeting to our country at large are incalculable and will be felt more and more as time goes on.

The celebration was made possible by the magnificent liberality of the state of Pennsylvania, which appropriated about $450,000 for that purpose and to aid its veterans, while the United States Government contributed $150,000 and the services of troops in the establishment and maintenance of the camp.

The Grand Army, through its efficient committee, of which Past Commander-in-Chief Eli Torrance was chairman, aided largely in making the celebration a success. The work of preparing for such a celebration and constructing and carrying on a camp of such magnificent proportions was a herculean task, and great credit is due the commission acting in behalf of the state of Pennsylvania and the officers of the regular army having the camp in their charge.

The consensus of opinion is that the camp, in all its details, was a success and gave satisfaction to those who accepted the liberal accommodations and rations provided for them.

While distinctions are invidious, it is but justice to say that the credit for the laborious work of preparing the camp and the entertainment of the veterans is due to the energy, perseverance, and self-sacrificing efforts of Major Normoyle and Major Grove of the regular army, in the immediate charge of that work, while the work of secretary of the commission was performed by Col. Lewis E. Beitler, who won the commendation of every one for his activity, energy, and suavity in the discharge of the delicate and many times trying duties of his office.

By command of

Alfred B. Beers,
Commander-in-Chief.

Henry J. Seeley
Adjutant-General.

It would be easy to add many more resolutions of this kind, and it is really a temptation to print the letters received by Major Normoyle and his associates from the Secretary of War and from General Wood, the Chief of Staff.

Associated with and assisting Normoyle, were a corps of fine, competent officers from the various branches of the service. Each and all helped to contribute to the successful carrying on of this great undertaking. I cannot do more than mention some of their names, as follows: Grove (Normoyle's right hand man), McCaskey, Stewart, Taylor, Bagby, Dalton, Hutton (the chief sanitary officer), Bradley (our chief surgeon), and Patterson, the latter detailed in charge of the Red Cross. There were others, and their names should be mentioned here did space permit.

The American nation may have no anxiety as to the report which our fighting establish-

ment will give in the event of conflict. There remains but one weak link in the chain to make us, not, indeed, an aggressive nation, but a nation whose objects are peace, prosperity, and good-will to all men. However, in order to secure and hold this position among the nations of the world, it is absolutely necessary that we should be well trained, well armed and provided for any emergency that may arise. Unfortunately, this preparation depends upon the support of our representatives at Washington, and without proper funds for the carrying out of these very desirable ends it is impossible to achieve this standing, no matter how well-intentioned and capable our officers and men may be.

I sincerely trust that the thousands of readers of CLINICAL MEDICINE will use every proper influence with their various representatives to secure for our defensive forces this very necessary support. It is recognized that in order to protect the weak and needy, one must be strong and well equipped. Being prepared in military matters does not necessarily mean conflict, but, rather, the opposite. A strong, well-prepared, and thoroughly equipped nation is in a position to demand and insist upon the proper treatment and recognition of the weak and helpless; and only by being so prepared can we maintain the position which we have come to fill in the front ranks of the nations of the world.

The Treatment of Sexual Impotence in the Male

Especially from the Surgical Point of View

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Author of the "Diseases of Society," "Sex Hygiene for the Male," the "Blood of the Fathers," etc.

SEXUAL impotency in the male is one of the most important disorders with which the physician has to deal. No other ailment produces so much misery—real or imaginary. No other ailment is of greater social and individual importance. Around the integrity of the sexual function revolves the happiness and perpetuation of the human race.

Broadly speaking, impotency clinically may be divided into (1) the simple exhaustion-type, (2) the neurasthenic type, (3) the psychic type, and (4) the organic type.

The Simple Exhaustion Type

By the simple exhaustion-type, I mean those in whom, as a consequence of various general diseases of an exhausting character, sexual energy is seriously inhibited. An example of this would be impotency following fevers. In these cases, there always is danger of the intercurrence of a psychic element that will cause the impotency to persist long after the primary cause has been removed and the patient has returned to his normal state of health and vigor. In the majority of instances of the exhaustive type of impotency, a favorable issue results upon the patient's restoration to health, without further treatment.

In the neurasthenic type of impotency, various factors enter into the etiology; sexual excesses, mental worry, shock or excessive brain-work being among the principal etiological factors.

It is the author's opinion that virtually all cases of impotency in which the general health and the integrity of the testes and penis are sound, are essentially the result of a combination of imperfect circulation in the erectile tissue (consisting in a defect either in the afferent or the efferent blood supply) and nerve-reflex inhibition of erection, together with general nerve exhaustion. The two conditions, nervous and circulatory, commonly are combined; thus, the etiology of impotency largely revolves around psychic, neuro-exhaustive, and mechanical conditions.

Gonorrheal and Other Local Factors

Gonorrhea and other infections and traumatic or inflammatory insults of various kind are important factors in impotency. Even here the local condition frequently is overshadowed by the psychic.

Disease of the posterior urethra—especially inflammation or congestion of the verumontanum—often are responsible for impotency. This fact cannot be too clearly borne in mind. Many times the prostate gland, as a whole, is at fault. It should be remembered, also, that the "psychic" explanation of impotency will not satisfy anybody but the physician. The psychic argument carries little weight with the patient, who is confronted by the material fact that he cannot secure an erection. He cannot be cajoled or laughed into discrediting the evidence of his senses and of his more or less

frequent unhappy experiences in attempting coitus. The laughter and indifference of the reputable physician have made "fine picking" for the quack.

Organic Impotency Not Common

Impotency in which true organic etiologic factors are involved is relatively infrequent and in many of these cases of an organic type there are certain factors which minimize the importance of impotency; as, for example, in certain cases of hypospadias, epispadias, and so on. Even in hypospadias frequently much can be accomplished, as witness a case of the author's in which, by operation, he straightened the penis and made an entirely new urethra out of the scrotum. The success of this operation was demonstrated by perfect coitus, the contraction of gonorrhea, subsequent marriage, and the birth to him of a 10-pound boy.

The author will not here discuss sterility in the male otherwise than to state that the impotent man frequently is only relatively sterile. If such a one is possessed of normal spermatozoa and they meet with a healthy ovule in its habitat in any manner whatsoever, impregnation is likely to result. Impotency causes sterility only in so far as it interferes with the meeting of zoosperm and ovule. Obviously, in treating impotency, all the etiological factors should be taken into consideration.

One of the types of impotency (often partial only) the cause of which is distinctly mechanical in character—the condition indubitably consisting in defective circulation—is that in which the erection of the body of the penis is normal or nearly so, but the glans remains soft and flaccid.

It has been the author's experience that this fault is peculiarly amenable to surgical measures of relief, save where it is owing to cavernositis, that is, chronic inflammation of the corpora cavernosa. In this condition, plaques and nodules form which produce marked deformity during erection and not rarely make coitus a physical impossibility. Underlying the foregoing cases general arteriosclerosis is often met with. Syphilis, gout, traumatism, and gonorrhea are the other chief etiologic factors.

The Local Treatment

(1) Deformities should be corrected by surgical means. (2) Infections should be overcome. (3) Topical applications should be endoscopically made to urethral lesions. (4) The veru montanum should receive especial attention. (5) The posterior and anterior urethra, especially the former, should receive either sedative or stimulating treatment, as conditions demand. (6) Defective circulation should be remedied by mechanical means.

The cold sound, the Kollmann-Oberlaender dilator, and the psychrophore are valuable agents for the stimulation or sedation of the urethra, and especially of the pars prostatica. These agents have also a marked psychic effect.

Electricity (galvanic) may be used as a sedative. Faradism is serviceable, for its stimulative effect.

Of all local measures, the author has most faith in resection of the vena dorsalis penis.

General and Constitutional Treatment

Rest, mental and physical, and freedom from worry always are essential in the treatment of sexual impotency, for the reason that in most, if not all, cases there is present an element of neurasthenia and psychic disturbance in which the patient's lack of confidence in his virility plays a prominent role. In many instances, a complete and prolonged change of scene is essential to a cure, even after all abnormal local conditions have been corrected, surgically or otherwise. In many of these cases, prolonged rest and freedom from care are sufficient to restore the sexual power; in other words, the treatment of neurasthenia in general constitutes the prime indication in a considerable proportion of cases.

The physician can not lay too much stress upon the importance of the nervous element in impotency. Local sexual derangements always produce more or less neurasthenia; first, by their psychic effects; second, by reflex derangement of the various organic functions through the sympathetic nervous system, which so richly supplies the sexual organs both in male and female.

No study of any given case of impotency is complete without investigation of the conjugal or extra-conjugal relations in which the impotency—real or alleged—manifests itself. With sensitive persons, mismating is a serious matter. The more refined and decent the men, the more powerful will be this influence.

The conditions under which coitus is attempted should carefully be inquired into; mental perturbation and perfect sexual power are incompatible. This, for obvious reasons, bears most pertinently upon the male.

Drugs as a remedy for impotency are a delusion and a snare. Most drugs have no special effect whatever on the sexual power. Those which have exert but a temporary influence, and in large doses are dangerous. Drug specifics for impotency are frauds. Giving drugs to the impotent may, in general be said to be like the application of the whip to a sick and weary horse drawing an overloaded wagon.

For all that, drugs have a place in the treatment of impotency. Sedatives, such as the bromides and opium, to allay irritability of the nervous system and emotional excitement, often are of value. Remedies that will allay local irritation in many instances are of distinct service. Thus, urotropin, the balsams, sodium benzoate, potassium acetate or citrate—in brief, any drug which soothes the inflamed urinary mucosa by modifying the irritating properties of the urine—is useful under appropriate circumstances.

Tonics, including strychnine, quinine, iron, and arsenic, many times are of great service as adjuvant treatment.

Hydrotherapy—in the form of hot or cold or alternately hot and cold baths, showers, and spinal affusions—is of the greatest value in the treatment of impotency. Sea bathing proves especially useful.

Physical exercise is essential, and of great assistance in treatment when combined with proper alimentation. Where nutrition is impaired as well as in obese patients, the dietary demand especial attention.

Attention to the skin, kidneys, and bowels is a *sine qua non*.

Resection of the Dorsal Vein

The author's experience in some 500 cases of resection of the vena dorsalis penis for impotency justifies, in his opinion, special consideration of this method of treatment of impotency.

Like all surgical innovations, operations on the dorsal vein of the penis for the cure of impotency, quickly after the introduction of this procedure some years ago, became a fad. The commercial surgeon hailed the new operation with delight, and even the conservative and conscientious surgeon welcomed the operation as a friend in need.

But, as usually is the case, the surgical fraternity divided into two camps—those who proclaimed the infallibility of the method and surgeons who asserted its utter worthlessness. The gap between the surgeon whose patients experienced a vigorous priapism before they left his operating-table and him who condemned the operation was so wide that an "outsider" felt constrained to believe that Mammon alone could bridge the chasm.

There was, however, something so seductive about the reports of the surgeons with the priapismal patients—and more especially in view of the fact that the procedure was so extremely simple and required only a few minutes under local anesthesia—that one was loth to give ear to adverse criticism. Then, still more entrancing was the yet more simple "improved" operation of "subcutaneous ligation of the dorsal vein."

The writer's own experience has shown, apparently, that the wide variation in results of resection of the dorsal vein of the penis obtained by different operators is largely explicable by a difference in the technic as well as in judgment in selecting the cases.

Experience has taught the writer that the operation, while not dangerous to life, is neither so simple nor so easily performed as its more sanguine adherents would have us believe. The quick operation and the subcutaneous ligation consist, in most instances, in anything but what is being claimed, namely, ligation or resection of the vena dorsalis penis.

The dorsal vein proper lies beneath the fascia propria and can not be ligated or resected safely without very careful and painstaking dissection. Subcutaneous ligation of the vein is a conception of anatomic ignorance. The ligation of the superficial penile veins is not ligation of the vena dorsalis penis. This could be accomplished without incision only at the expense of important vascular and nerve structures.

Is the Effect of the Operation Psychic?

It has been said in certain quarters that the benefit of the operation is imaginary, the impotency being psychic and the effect of the operation purely so. To this one may reply that inability to secure erection is regarded by the victim as a condition, not a theory.

The writer freely admits the psychic element, not only in impotency, but in the effect of resection of the vena dorsalis penis for its cure; still, he is of opinion that the only way to effect a cure even in the purely psychic cases of impotentia coeundi is, to introduce the material factor of an actual erection. Like the man from Missouri, the psychic impotent must be "shown" before he believes; and he must "believe" before he is capable of exercising his procreative function. No amount of argument as to po-

tential power is in most cases sufficient to offset the demoralizing effect of dynamic incapacity.

The relatively prompt effect of properly performed resection of the vena dorsalis penis in demonstrating dynamic capacity, through purely mechanical circulatory agencies, must necessarily be a powerful factor in the cure. Add to this the fact that the mechanical conditions secured by the operation are practically permanent in a considerable proportion of subjects, and we have excellent reasons for faith in the efficacy of the operation.

Admitting, for the sake of argument, that the effect of the operation upon the circulation of the penis is merely transitory, this would not count against the operation in purely psychic cases; still less in those with a certain degree of psychic aberration. The suggestion of dynamic capacity has done its work long before the effect of the operation could pass away completely. If the argument that the effect of the operation is purely psychic is permitted to have much weight, the majority of patients would be discriminated against.

The Selection of Cases

The results of the usual treatment in sexual neurasthenics are not likely to be so brilliant as in many cases of neurasthenia in which there are no sexual factors for consideration. The autosuggestion of impotency may remain operative after the patient has attained a fair degree of improvement in his general health. It must be confessed also that a patient whose mind is overshadowed by the idea that he is impotent is not likely to be as readily relieved of his neurasthenic symptoms as are individuals in whom the element of worry about the sexual function does not exist.

In sexual neurasthenics, therefore, the operation under consideration has a considerable range of application. Especial care is necessary in discriminating between the cases of sexual neurasthenia with associated impotency.

In general, two types will be met with, one in which the impotency is consequent primarily upon general neurasthenia, and the other in which both the impotency and general neurasthenia are primarily the result of some local condition of the generative tract or its adnexa.

It follows that in the treatment of sexual neurasthenics certain organic elements often must be seriously considered. For example, in many cases of neurasthenia the coincidental impotency depends primarily upon irritative or inflammatory conditions of the testes, of the prostatic urethra, the seminal vesicles or even of the anterior urethra. Obviously, resection of the vena dorsalis penis is not to be considered under such circumstances until the conditions enumerated have been, so far as may be, removed.

Psychic Versus Organic Types

It is very difficult in many instances to dissociate the psychic and neurasthenic types and that variety of impotency in which actual organic disease exists in some portion of the genitourinary tract, this organic disease acting directly or reflexly in the production of impotency.

With the consciousness that something is wrong with the sexual organs many times there is associated the fear that impotency will result. When doubt as to his virility enters the patient's mind, his virility always is impaired to a greater or less extent.

It follows, therefore, that in many cases in which organic conditions can be found that afford a rational explanation for impotency the operation of resection of the vena dorsalis penis is worthy of consideration, as promising relief that cannot be afforded in any other way.

The gonorrheic having a deep-seated infection is very likely to become impotent. How much of this impotency is owing to the irritation of the deep infection and resulting inflammation *per se*, and how much to the effect upon the patient's mind of the knowledge of the existence of the deep-seated inflammation, it would be very difficult to say. After the organic conditions have been corrected in gonorrheics, it may be necessary to undertake more radical means for the relief of the impotency. In the psychic, neurasthenic, and exhaustive types, are embraced by far the larger number of cases of socalled partial impotency in which erections are feeble or transitory.

While an organic element exists in many instances in which impotency is associated with disease of the sexual organs, the organic type legitimately includes only such cases as those in which erection is impossible because of maldevelopment, underdevelopment or deformity of the sexual organs; besides injuries, surgical or otherwise, which interfere with the free circulation of the blood in the penis or destroy wholly or in part its innervation.

Cases of impotency following prostatectomy, castration or serious disease of the

testicles naturally fall into the category of organic impotency. In passing, I desire to say a word regarding impotency following prostatectomy. While admitting that this condition is not unusual, I believe, from my own operative experience, that its frequency is greatly overrated.

Primary sexual enfeeblement, as a consequence of protracted suffering and infection or depending upon the advanced age of the patient, explains a certain number of cases. The enforced rest after operation sometimes results in the loss of such little virility as the patient still possesses, as a consequence of interruption in the normal exercise of the sexual function.

All along the line of cases of impotency following prostatectomy, however, we are faced by the strong element of psychic suggestion contained in the general impression on the part of the laity and, I regret to say, on the part of the profession as well, that this operation is, necessarily, followed by loss of sexual power. The conscientious surgeon is, unfortunately, compelled in all instances in which he performs prostatectomy (because of a certain element of psychic suggestion which may result badly) to lay impotency before the patient as one of the possible results of the operation. The surgeon, therefore, may himself be responsible (though innocently) for psychic impotency following prostatectomy.

Disturbed Innervation and Impotency

Impotency due to disturbed innervation from cerebrospinal disease of various kinds must of necessity be classed with the organic type, although in such cases the condition is not an entity, but is merely symptomatic of certain serious nervous disturbances. Under these circumstances, the degree to which virility is impaired obviously depends upon the extent to which the primary disease has progressed. Cases in this category are very rarely a legitimate field for the treatment of impotency *per se*. Such patients as a rule require absolute rest for the nervous system—rest with which sexual indulgence is incompatible in their subsequent life.

However, cases arise in which the pathologic condition of the central nervous system is not progressive and has not advanced to a degree that would make the operation of resection of the vena dorsalis penis either hopeless or unwarrantable. It must be remembered that it is in this class that the surgeon should be most apprehensive of failure.

I recall an instance in which a man afflicted with an apparently nonprogressive locomotor ataxia was so disturbed in mind because of his impotency and so insistent that he be cured of it that I suggested (and was granted) a trial of the operation under consideration. There was a marked increase in the size of the penis after recovery from the operation, and during a number of months thereafter—until the patient died suddenly from cardiac disease—there was a partial restoration of the power of erection. Innervation was so imperfect that the most that could be secured by the operation was the hopeful attitude of the patient's mind regarding the possibility of complete recovery by and by.

While in most instances in which complete or partial success is attained by the operation the benefits are appreciable in greater or less degree almost immediately, there are cases in which success is not to be expected for some months. One of my patients, a prominent medical man, wrote me that it was not until some eight or ten months after the operation that he became assured of its complete success. This gentleman since then has married happily.

From my own experience, I have concluded that the operation is a success in the majority of cases of purely psychic impotency, and in practically all those of partial impotency in which there is no organic condition of the nervous system that seriously impairs innervation. As might be expected, the operation is a failure in the greater proportion of the latter kind. In those patients in whom erection, while primarily vigorous, suddenly fails during the performance of the sexual act, the operation is successful in by far the larger number of instances. In cases of complete impotency in which there are no irremediable local causes of functional disturbance of innervation of the sexual organs, the operation appears to be successful in fully fifty percent and beneficial in probably one-half of the remainder.

In presenting to patients the claims of the operation, a full and frank statement of possibilities and probabilities of a successful result should be made, with due and thorough consideration of the individual merits of the given case. A careful and exhaustive inquiry should always be made into the circumstances under which the erectile power is wanting, with especial reference to the psychic influences dominating at the time of failure.

As to whether the results of the operation substantiate the claim that defective erection is owing in a large proportion of instances to

the too rapid emptying of the blood from the dorsal vein of the penis, I am unable to say. It seems to me, however, that this by no means is an inconsiderable factor in the etiology of impotency, and, consequently, in the results obtained by resection of the vena dorsalis penis. Nevertheless, it must be remembered that a sluggishness of arterial supply would, in effect, be precisely the same as a too rapid return of the venous blood from the part, and this probably is a logical explanation of a considerable proportion of cases of impotency, and consequently of the benefits derived from operation.

The Technic of the Operation

The operation of resection of the vena dorsalis penis can readily be performed under local anesthesia.

After the shaving of the penis and pubes (the latter procedure not being always essential), a strip of gauze is tied moderately tight around the root of the penis; this being for the purpose of localizing the effect of the anesthetic and prolonging its action. With the ordinary hypodermic syringe, the anesthetic solution is injected ring-wise about the organ, girdling it in front of the constricting gauze. It usually requires about 40 minims for this purpose. The injection is now made in a line parallel with the mid-dorsal line of the penis upon either side and about one-half inch distant from it. The solution is injected drop by drop, as the syringe is withdrawn, for a distance of about one and a half to two inches. The syringe is again introduced in a line connecting the anterior extremities of the previous lines of injection, and again withdrawn, the solution being injected drop by drop. Within five minutes the operation may be proceeded with.

The first incision should involve the skin only, the next the fascia, which is caught upon either side with a snap-forceps and thus held apart. The deep layer of the superficial fascia is now incized, and just beneath it in the middle line will be found the dorsal vein. The latter now is dissected free very carefully. If any small venous branches of the dorsal vein chance to be divided, there will be considerable hemorrhage; which naturally makes the operation much more difficult. The vein having been freed and lifted from its bed, it is dissected well down into the anterior and posterior angles of the wound, and a ligature of very fine catgut is applied anteriorly. This is cut short, and a similar ligature is applied at the upper angle of the wound. This is in turn cut short and the intervening portion of the vein is excized.

The constricting gauze about the root of the penis is now removed and all hemorrhage checked. Care must be taken not to permit any oozing points to remain, as a hematoma is formed very readily. The deep layer of the superficial fascia is first sutured over the bed, from which the vein has been removed, with very fine catgut; this is followed by suturing of the superficial fascia, thus forming two layers. If there is any difficulty in outlining the separate layers of the fascia, there is no objection to uniting all of the fascial envelopes in one layer.

This suturing of the fascia in separate layer or layers is an admirable safeguard against deep infection, which otherwise might prove serious if there should be any suppuration involving the body of the penis. The fascia having been sutured, the skin is stitched with (preferably) horsehair, although fine catgut is admissible. The wound is now dressed with iodoform gauze and collodion or celluloid cream.

The skin wound usually heals by first intention. Sometimes, however, it does not do so, because of vigorous erections, which, in favorable cases, the patient is likely to have regularly at night following the operation. The mechanical disturbance, in the absence of any source of infection, is responsible for this failure of primary union.

The patient, as a rule, need not be confined to his bed longer than four or five days, although a week sometimes is necessary. I presume that it would be fairly safe for the majority of patients to go about after the operation, but on general principles it seems better for them to be kept quiet. If erections are very vigorous and somewhat painful, it may be necessary to apply cold.

Where the superficial veins of the penis are large and tortuous, it is wise to excise, through the same incision, an inch or more of one or two of the principal vessels. This can readily be done by stretching the elastic skin downward upon either side by traction upon the edge of the incision until the superficial veins are reached.

I cannot leave the subject of the treatment of impotency without allusion to my recent experimental work in sex-gland implantation. From my experience thus far, I am convinced that testicle implantation from either the living or the dead body is the indication *par excellence* in obstinate cases of impotency not the result of sex-local or cerebrospinal organic disease. The method also has re-

constructive effects of a general character, dependent upon the action of the sex-gland hormone. Unfortunately the cost of the procedure necessarily limits its field of application.

Conclusions

1. The resection of the vena dorsalis penis in the treatment of impotency is an operation requiring accurate anatomic knowledge and can not be done subcutaneously without serious danger of injury to important parts or of total failure of the operation, even granting that it is practicable—which I do not believe it to be.

2. The operation, while not essentially dangerous, is neither so simple nor so easily performed as has been claimed for it.

3. The location of the dorsal vein is such that careful and painstaking dissection is necessary for its proper ligation or resec tion.

4. The ligation of the superficial penile veins has been performed in many instances when the operators claimed that they had ligated the dorsal vein proper. This operation upon the superficial veins frequently is essential to a complete operation; when performed alone, however, it is futile.

5. The operation is beneficial in very many cases on strictly psychic grounds, but this does not militate against the advisability of performing it. The important thing for the patient is, to have function restored.

6. In some cases of impotency of organic origin, the operation is not to be thought of; but, in quite a wide range of cases of the kind the operation is successful, firstly, because of its mechanical effect; secondly, because of its psychic effect.

7. One of the most important elements in the cure of impotency by a properly performed resection of the vena dorsalis penis is, the demonstration of the dynamic penile capacity through purely mechanical circulatory agencies.

8. The mechanical conditions thus secured are permanent in quite a large proportion of cases.

9. In cases of complete impotency not dependent upon irremediable local causes of functional disturbance of innervation, the operation apparently is successful in fully fifty percent, and beneficial in probably one-half of the remainder.

10. In by far the majority of cases of impotency that come under the observation of the surgeon, a trial of this operation is justifiable.

11. Sex-gland implantation apparently is the most promising remedy in certain cases of impotency, but its range of application is limited and the operation necessarily expensive.

Concentration

By Strickland W. Gillilan.

This thing I do was never done before.
  There is no other place in all the earth.
There is, besides myself, no human more
  That ever thanked his Maker for his birth.
I and the thing I do are everything
  That is or was or will be 'neath the sun—
There is no sun across the sky a-swing,
  Nor will be till this task in hand is done.

Thus, shut out from the universe, you see
  The stint, clear-eyed, unhampered by tradition;
See things as God intended them to be,
  No other mind dictating your position.
Through just such means as this comes all the help
  The world receives to lift it from a rut;
The State Ship's keel is cleaned of clustered kelp
  And doors are oped that custom had marked "Shut."

Bacterin Therapy in Every-Day Practice*

III. Vaccine Treatment of Whooping Cough

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE.—If you want to understand the new therapeutic world of biologic medication you should read the fine papers Doctor Wolverton is contributing to "Clinical Medicine." The series began in our May number and was continued in June. The accompanying is number three. Others will follow. Don't miss a single one.

FROM time immemorial, the medical profession virtually has been helpless in the treatment of pertussis. Antipyrin, belladonna, bromides, bromoform, chloral, chloroform anesthesia, gelsemium, hyoscyamus, iodine, monobromated camphor, quinine, resorcin spray, silver-nitrate spray, besides a long list of other remedial agents have been tried, and generally found wanting. Recently there have appeared several "ethical proprietaries" having thyme as their base; and these have proven about as disappointing as their predecessors. It is a common occurrence to hear some of the laity remark that "it is no use going to a doctor to get medicine for whooping-cough;" and, considering our lack of success, we hardly can blame people for their lack of confidence in our ability to cope with this *bête noir* of childhood.

But now it would appear that the old order is changed and that we shall have to educate the laity to the fact that we at last have a *specific* remedy for whooping-cough, thanks to the investigations of Bordet and Gengou, who, in 1906, isolated the specific bacillus of pertussis. Once the causative agent was known, it was a comparatively simple matter to develop a bacterial vaccine from it, after the method of Sir Almroth Wright.

Reports of Experience

Recently several medical writers have reported series of cases of pertussis in which the victims were treated with the Bordet bacillus vaccine. E. E. Graham (*Amer. Jour. Dis. Childern*, Jan. 3, 1912) reports 24 such cases in which a vaccine prepared from the specific bacillus was employed. In 71 per cent of the cases, the results were beneficial and, in his opinion, warrant a more extensive trial of the vaccine.

M. Ladd (*Arch. of Pedi.*, Aug., 1912) cites 9 cases of typical whooping-cough in infants and young children treated with vaccines at intervals varying from five days to two weeks, and in which no harmful symptoms, local reactions or bad effects, were seen. The doses were from 3 million to 40 million killed bacilli. One child to whom the vaccine was administered was but seven weeks of age. Ladd remarks that in another series of cases he would use much larger doses, at 5-day intervals or oftener. No other treatment was given, and usually after three injections there was a decrease in the number and severity of the paroxysms. All of the sufferers recovered without experiencing any complications, on an average in five weeks after the institution of the specific treatment.

J. Zahorsky, of St. Louis, considers vaccines, in doses of 30 million to 50 million, to be a very helpful therapeutic measure in pertussis.

G. Morton Illman, of Philadelphia (*Intern. Clin.*, Vol. 2, Ser. 23), says he believes that larger doses, regularly given at 3- to 5-day intervals, will, in the future, give us better results; providing, of course, that we keep in mind the possibility of the secondary and complicating presence of other actively pathogenic microorganisms abounding in the respiratory tract.

A number of other articles have appeared in the literature during the past year, and several of them have been abstracted in *The Journal of the American Medical Association.*

I have carefully perused the literature pertaining to the vaccine treatment of pertussis, and have encountered but few reports of failure from the treatment, and none whatever of any untoward effects. Furthermore, it is a notable fact that the best results have been obtained where comparatively large doses of the vaccine have been employed, failures, apparently, being traceable to too small dosage.

My Experience in an Epidemic

Lately there has occurred an epidemic of whooping-cough in the neighborhood in which I am practicing, and I happened to be the only physician in this locality to employ the pertussis-vaccine. Among the children treated by time-honored methods, and in which cases *no vaccine* was given, some 9 or

*Read before the Sixth District Medical Society, Bismark, North Dakota, June 16, 1914.

10 deaths have occurred. Of the 36 patients whom I have treated, and to all of whom the Bordet vaccine was exhibited, *every one recovered.* The only other remedy employed in my cases was iodized calcium; and in a few cases in which this latter chemical was given without the simultaneous use of the vaccine, results were notably less satisfactory.

Of the above-mentioned 36 patients treated with vaccine, 15 were infants a year or less of age; 13 others ranged from one to four years of age; while the 8 remaining patients were considerably older.

My first patient was a girl of three years who already had been confined to bed for nearly three weeks. Her infant brother had died of bronchopneumonia, complicating whooping-cough, two days before I was called to attend the little girl. A dose of vaccine containing 100 million killed Bordet bacilli was administered, and within about four days the little one was able to be up and about the house. A week later a second dose of 200 million was injected. The child speedily recovered without any further inoculations.

In another family, an infant and a boy of two years had well-developed attacks of pertussis. The boy had become drowsy and very feverish, and the parents feared the onset of a complicating bronchopneumonia. In these two children, a mixed vaccine containing in each dose 100 million Bordet bacilli, together with pneumococci, streptococci, and catarrhal micrococci, was employed. The parents reported a noticeable improvement in the condition of both children *in about twenty-four hours.* No second dose was given, and both children made a quick recovery.

Out on a ranch some fifteen miles from Linton, an infant had been ill for several weeks and exhibited the characteristic "whoop." About two months ago, the paroxysms became so severe and frequent that the child had several convulsions. I was called in the middle of the night; but getting lost in a "near-blizzard," I did not reach the baby until early in the morning. A dose of a mixed vaccine (identical with that used in the case just preceding) was given, and I told the parents I should return in a week to repeat the treatment. A few days later, the father of the child telephoned that it would not be necessary for me to come, as the baby was recovering rapidly.

A Summary

It would be a useless waste of time and space to give detailed reports of the rest of my cases; so, I will finish with a few conclusions drawn from my own experience with the vaccine treatment of pertussis, as well as from the reports of other observers.

1. In my own personal experience, in a limited number of cases (36), the results of vaccine therapy of whooping-cough have been very satisfactory, indeed.

2. In no case occurring in my own practice has there been any unpleasant symptom resulting from the vaccine treatment; nor can I learn of any such from a perusal of the literature.

3. Experience seems to prove that the best results are attained where large doses (50 million to 200 million killed bacilli) of the vaccine are employed. The fear of a harmful negative phase, here as elsewhere in the field of bacterial therapy, apparently has been greatly overdrawn. I have used only large doses, and have never seen any harmful effect whatever. Where failures have been reported, invariably too small doses of the vaccine have been used.

4. As a prophylactic and in early, uncomplicated cases of pertussis, the plain Bordet bacillus vaccine suffices. But in late cases or in cases complicated with bronchopneumonia, a mixed vaccine containing the pneumococcus, streptococcus, and micrococcus catarrhalis, in addition to the Bordet bacillus, is indicated.

5. The Bordet bacillus vaccine is a dependable prophylactic, if used promptly after exposure; or before exposure when an epidemic is known to exist. My own two children, aged two and a half and seven years, respectively, have repeatedly been exposed to bad cases of whooping-cough during the past two months. After their first exposure, each was given 100 million killed bacilli; this dose was doubled a week later, and again in two weeks. Neither child has since contracted the disease.

6. I believe, from my experience, that the gluteal region is the most likely spot into which to inject this or any other kind of vaccine, in the case of children. There is here plenty of loose subcutaneous tissue into which the vaccine can easily be injected, without causing undue pain and inconvenience. A further advantage is that the child cannot see what you are about to do, when it is turned face downward across its mother's lap.

7. An honest trial will convince the most skeptical that in the vaccine therapy of whooping-cough we at least have made a wonderful advance over the old-time empirical remedies (so called).

Observations on the Effects of Bacterial Vaccines

By W. F. VON ZELINSKI, Sc. B., M. D.

First Lieutenant, Medical Reserve-Corps, U. S. Army; Demonstrator of Surgical Anatomy at Bennett Medical College

THE literature concerning immunity grows more voluminous from year to year, and the work along those lines has grown so extensive that it becomes a burden even to those who are immediately concerned with such work; and, so, too, it becomes impossible for the practitioner to gain any more than a smattering of what immunity and its allied sciences concerns itself with. To speak of searching the original work and to investigate the various theories is, of course, to speak of the improbable. Yet, in spite of the fact that the less we know of a subject the more we write (and conversely), it strikes me, as a mere observer, that nothing else has ever exercised such a general influence on the scientific practice of medicine as have the problems of immunity and serum therapy.

It must be admitted that marvelously rapid strides are being made in biological medicine. The abstract question of today has the greatest practical value tomorrow not merely from a therapeutic but from a diagnostic standpoint as well. The pathological physiology and the evolution of many diseases has been greatly illuminated ever since, we might say, the readvent of humoral physiology.

The question of serum therapy and diagnosis being, to my mind, such an important one for the advancement of the man in general practice and the good of the community, it affords me pleasure to contribute my observations and experiences with the bacterial vaccines in the treatment of disease.

It must be understood that I am, perhaps, at the same disadvantage as are most men engaged in general work, in that the opportunity for treating any great number of certain kinds of conditions has been rather limited. However, the experiences herein recited cover a period of about five years, and I might mention here also that, having been accustomed to the use of various sera for diagnostic and therapeutic purposes ever since leaving college, an accurate comparison with the older methods of treatment can not be made.

The Use of Tuberculin

Perhaps the best known of all bacterial vaccines is tuberculin, and, although one reads every now and then of controversies as to whether the good is derived from their use or whether it is the adjunct treatment that has the most curative value, I believe enough work has been done to prove beyond a reasonable doubt that the various tuberculins are of distinct curative value. I have had but three cases which I considered suitable for the bacterial vaccine treatment, and these patients made very satisfactory recoveries.

Briefly stated, I employ the treatment under the following circumstances:

1. The patient's afternoon temperature must not go above 100° F. None or only a very few tubercle bacilli must be in the sputum.

2. I must have good control over the patient; that is, they must report to me twice weekly, with their temperature charted at 9:00 a. m., 1:00 p. m., and 5:00 p. m. They must be in a position to give up or change their occupation, and must follow out the casual orders as to diet, exercise, and general hygiene.

I use tuberculin (T R) in serial dilutions, and control my dosage by its effect on the temperature. If this should rise above the usual afternoon temperature, I do not increase the dose, and may even drop several minims until matters have again adjusted themselves.

Some patients with advanced tuberculosis who have refused sanatorium or hospital treatment I have treated with mixed-infection stock bacterins containing no tubercle bacilli, in addition to the usual measures adopted in such cases. I cannot say that there was any difference in the results.

Cases of Acne Vulgaris

Especially interesting are the cases of acne vulgaris of the face. These were classical cases. The prophylactic treatment in the way of diet and care of the gastrointestinal tract was followed out, although there was no particular indication for any special treatment in this direction.

Active treatment consisted in having the patient scrub the face at night with a preparation of green soap containing prepared chalk and sulphur in suitable proportions. Very hot water was used, this followed by rinsing with cold water. The face was then dried with a rough Turkish towel. This was followed by the application of an ointment

containing as its active constituent, in cold cream, either ammoniated mercury or resorcinol. Twice weekly the patient called at the office, at which time the more prominent pustules were opened under aseptic precautions, while the base was swabbed with 95-percent phenol, followed by alcohol.

A socalled acne stock bacterin was at first injected twice weekly, but latterly an autogenous preparation was used. Both these preparations contained the various strains of staphylococci (too well known to be detailed here). In every case of uncomplicated acne vulgaris so treated I had good results, the treatment proving gratifying both to the patient and to myself.

I consider the bacterins of distinct value in the chronic dermatitides and would give the preference to the autogenous bacterins. Six subjects were thus treated.

Bacterin Treatment of Rheumatism

One may be skeptical about the effects of any remedy in the treatment of articular rheumatism; likewise one may be pardoned for waxing enthusiastic if he attains good results in a half dozen, or so, of cases, hand-running. Such results I have often secured by the use of the various salicylates. Likewise I have failed to make any impression whatsoever in an equal number of cases, also hand-running, under the same line of treatment. Doubtless I recite a common experience when I say that I have tried anything and everything in such cases; hence, it may not seem strange that the various bacterins and sera have been resorted to. And these, with the exceptions named, have given good results up to the present time.

The earlier patients were treated with Schaefer's modified vaccines as prepared by one of the large pharmaceutical houses. However, the reaction after their administration proved so marked, and the results being negative, I abandoned their use in rheumatism as well as in other diseases.

Lately I have been administering the combined bacterins, after Van Cott's formula, and in every instance in which I have used them (8 in number), I am sure they have exercised a decided effect for the good. I should like to mention one case in particular:

Experience With Van Cott's Bacterin

A man, thirty-four years old, barkeeper, was having a third attack of polyarthritis within a period of two years. The salicylates in every form and various combinations, together with alkalis, baths, applications, had all been tried in vain.

The preparation of an autogenous bacterin being out of the question, I decided to try the Van Cott bacterin. Injections were given at intervals of four days, and these caused marked local reaction and some exacerbation of pain in the joints. However, in from twenty-four to thirty-six hours after the injection the temperature would drop to normal and remain stationary for about twelve hours, then gradually rise again to 100° or 101° F. The relief from pain experienced was very great, so that after the use of six injections the pain had left the joints; while the temperature had dropped to normal and remained so.

Twelve injections in all were given. The patient thereafter was soon able to go about, although some stiffness in the joints remained; but this gradually disappeared under iodine inunctions and potassium iodide internally.

The other cases were classical in their symptoms, and my belief in the efficiency of the bacterin treatment is derived alone from the short duration of these attacks. It was also noticed that the heart complications were less frequent and less pronounced.

In children, I have tried the treatment in four cases, and am now in a position to testify to its value, especially in treating cases of rheumatic endocarditis and chorea.

Coli Bacilluria

My experience covers 2 cases, one being that of a man who had chronic cystitis. He improved under the administration of an autogenous coli bacterin, but was not completely relieved, owing to a prostatic obstruction. However, repeated examinations of the urine showed marked diminution in the number of coli bacilli, and the patient was enabled to control the urine much better.

The second case was that of a woman who had had two miscarriages. She had bladder symptoms of three-years' duration, and absolute retention following one of her miscarriages, this necessitating the use of the catheter for nearly a week. After twelve injections of an autogenous bacterin, she was now able to pass her urine freely without distress, still, she was not enabled to hold it longer than four hours.

This last case is especially interesting, inasmuch as no other treatment was employed, and at one time, even after emptying the bladder, the catheter showed residual urine of from one to two ounces. Later I determined that this patient was also affected with pyelitis of the right kidney, the exact cause of which has not as yet been discovered.

I have never been able to convince myself that any decided effects have been obtained from the use of gonococcus bacterins, stock or autogenous, in acute or chronic gonorrhea. It is possible that I may have obtained some results in the patients with gonorrheal endocervicitis; but this, too, is doubtful, inasmuch as a change of local treatment seemed to produce very decided effects.

In my earlier cases, I applied a solution of argyrol, protargol, and iodine, in combination with the bacterins, seemingly without effect, or at least without lessening the discharge. It is a well-known fact that the gonococcus may be found in such discharges in great abundance at one time, and not at all at another, even when the patient is not under treatment.

At present I make local applications to the cervix of pure formaldehyde, and, contrary to what one might expect, it seems to cause very little or no distress, while the results have been better than with any other local application that I have ever tried.

I use the bacterins in combination with this, of course. In men, I have abandoned the use of bacterins, as I feel reasonably certain that they do very little, if any, good.

In conclusion, I would say, as I have stated before, that I have used bacterins quite extensively; and, besides the cases already mentioned, I may mention erysipelas, furunculosis, abscesses, cellulitis, and postoperative suppurating wounds; but the number of cases of each kind have been so few that I am unable to form any definite conclusions as to whether the bacterial vaccines helped or whether it was the other treatment.

Tragedies in a Sexologist's Practice

By WILLIAM J. ROBINSON, M. D., New York City

Author of "Never-Told Tales," "Sex Problems of To-day," editor of The Critic and Guide, and The American Journal of Urology

THE practice of one specializing in venereal and sexual disorders is an interesting one. One hears peculiar stories, one acquires a unique insight into human nature, into the intricacies and aberrations of that powerful mainspring of human life—the sex instinct. Unexplored and uncharted depths of human psychology are opened up to you. It is the most interesting branch of medicine, but it is also the saddest one.

At the end of a day's work my heart often is filled with sadness and pity for human ignorance, human weakness, and human suffering; and I feel amazed at the intensity of the conflict between human instinct and social-religious restrictions imposed upon the natural expression of that instinct. And, so, it is no wonder that at the end of nine or ten months of steady daily work of this nature I feel tired and weary; and I long to get away to places where nature *is* at its best and men *appear* at their best.

What a relief it is to exchange the steel sound for an alpenstock; how much more pleasant it is to look through a telescope at the snow-clad mountains than it is to peer through the endoscope at the veru montanum; and how incomparably nicer it is to fondle a rose than it is to massage a prostate gland!

But all in its time. I must not forget myself. The vacation is not yet, and I have started out to describe a day's work out of my practice. So, let us proceed. The longing for a vacation will become more understandable. For, the tragedies are too frequent.

Here are cases from a single day's practice.

Malignant Syphilis

Case 1. Young Mexican. Quiet, timid boy, aged 19. Sent to this country by his wealthy parents, to acquire an education in a private school. What he did acquire very soon was a case of *precocious malignant* syphilis. The entire body is a mass of sores and ulcers, so that the underwear sticks, and upon the attempt to remove it there is bleeding from hundreds of points. The mouth is *full* of mucous patches. A few days' treatment worked wonders in his case—how I did wish that Christian Scientists and drugless healers could have watched this case from day to day—but he wrote home, asking for money and telling just what his trouble was.

Then he received a letter from his father ordering him to come home at once, together with just enough money for a steamship-ticket to Vera Cruz. He trembled like a leaf when he referred to his father, who apparently was not any too gentle. He said he thought the best thing for him to do was to jump off the steamer. Not only a career but a young life completely ruined. One can imagine

what kind of reception he will be accorded at his father's hands, and what kind of treatment he will receive at the hands of some local doctor.

Case 2. Man, married seven years. Father of three young children and husband of a beautiful young wife. And still he considered it necessary to indulge extramaritally. There was the almost inevitable result—gonorrhea. And now he is in a great hurry to get cured; for he cannot have relations with his wife, and if she should get suspicious—why, there would be no end of trouble. She is not one of those who would stand for such a thing. And he is a fine fellow: a pillar in his church and conducts a Sunday-school class.

The tragedy in this case is not the contraction of the gonorrhea—sometimes the best thing that can happen to a man, for it keeps him straight forever after and makes him sublimate his sexual energies into higher directions. The tragedy here is that a man who has a young, healthy, and attractive wife should consider it necessary to patronize women who are greatly inferior, not alone mentally and spiritually, but even physically. Yes, this is a real tragedy, and unfortunately a very frequent one.

Case 3. Congenital homosexual. Refined fellow, feels his condition very deeply, considers it the most terrible tragedy that could ever befall any man or woman. He would love to have a home and children. His dreams, all of a homosexual character, fill him with loathing and disgust and drive him to despair. There may be homosexuals who are reconciled to or even proud of their abnormality, as some sexologists claim, but I must confess that I have not met such types. Naturally, those who are satisfied with their condition will not come to a physician to be treated for it.

Some Cases of Urethritis

Case 4. Girl of fifteen, infected with gonorrhea by her uncle. Nothing more, I think, need be said to make the tragedy stand out in greater relief. The tragedy is tragic enough in the one sentence of nine words. And, *en passant*, I wish to add that instances of seduction and infection of young nieces by uncles or near relatives are extremely common. Only physicians, and generally only specialists, learn about them. The public never or only very seldom hears of them. To bring the case to court, means a scandal and disgrace to the family and the penitentiary for a blood-relation. Consequently the tragedy is hidden and the parents do the best they can under the circumstances. Usually—except in the lowest strata of society—the uncle pays for the cost of the treatment.

Case 5. Woman about twenty-nine. Was married about a year and a half ago and was infected soon after the wedding; left her husband two months later and has been struggling very hard since then to support herself. Has taken up stenography and typewriting, and has now a position at ten dollars a week. Says she would work her finger-nails off before she would return to her husband. Some women just can't swallow certain things. Others put up with all their husband's derelictions—infidelity, abuse, venereal infection. Which is the higher type of woman?

Case 6. Young fellow with an ordinary gonorrhea. He is practically well, and he does not take his trouble seriously. And that is just what is tragic about this case.

Case 7. Man of thirty-six. Has never had sexual relations, but has masturbated in moderation since the age of fourteen. Wants to get married, but on making an attempt finds himself impotent, there being complete *impotentia erigendi* and *ejaculatio praecox*. Is extremely despondent and gets severe attacks of the blues. A man who up to the age of thirty-six has had no sexual relations is a tragedy—a victim of our stupid social restrictions and false teachings.

Case 8. A man of forty-seven, married, father of several children, a substantial and respectable business man from Columbus, Ohio, came to New York for a few days to do some buying. He went out one evening and—contracted syphilis. It is perfectly heartbreaking to watch him when the positive diagnosis is pronounced. His face is blanched, his knees tremble, and he looks a picture of the deepest despair. How will he go home, what will he say, how will he be able to take the long tedious treatment, and that whole litany. But what could I do? I could only sympathize with him, pity him, and start him on the proper treatment (for every day counts) and which will have to be continued in his home town.

Cases of Illicit Pregnancy and Abortion

Case 9. Girl of nineteen. One of our radical feminists. In spite of some of her uncompromising radicalism, she has some difficulty in telling her trouble. But it is easy to guess it. She is two months overdue, and so forth, and so on. Gently but firmly I tell her that I sympathize with her deeply, but that I cannot help her. That I am not in

that line of work. That abortion always is accompanied with some element of risk, and that my important work does not permit me to take any risks, and more like that. She goes away broken-hearted; still, she will not have great difficulty in finding an accommodating physician.

Case 10. Another young woman. She had an abortion performed on her some six weeks ago by a midwife, and since then she has been bleeding continually and lately has experienced severe pain in her left side; has lost several pounds in weight; is very anemic and suffers from insomnia. An examination shows an endometritis and salpingitis, the result, undoubtedly, of infection at the hands of the midwife. She may get well under conservative treatment; but she also may need an operation. Women who go through life chronic invalids on account of bungling abortions are met with only too frequently.

Case 11. A young physician, an exceedingly sympathetic fellow. Was to be married on a certain date. Everything was arranged. Went out with some friends, drank more than he should have, went to a notorious place, contracted gonorrhea. The condition is of the ultravirulent type. The wedding will have to be delayed indefinitely, for the doctor would not think of marrying until he is absolutely cured. And we know how long it sometimes takes to effect an absolute cure of gonorrhea.

Why will men do such things—jeopardize their own health and happiness and the health and happiness of their prospective wives on the very eve of their entering the bonds of matrimony? Is it just sheer wickedness? Or does the word "bonds" offer some explanation? Of course, it is very simple to explain things by calling them wicked, vicious or immoral, but, while some of the men do deserve some such epithet fully, it does seem so absurd to apply it to some types of men. Nobody, I am sure, who knew this physician well would call him vicious or immoral, for in all other things he is the very soul of honor. So, what *is* the explanation?

The Childless Couple

Case 12. A middle-aged couple. In poor circumstances, the husband having a small printing-shop. Married twelve years, but no children, and the wife is just "crazy" to have a child. Examination of the husband shows plainly the legacy of an antecedent double epididymitis, and an examination of the semen shows total azoospermia. Am obliged to tell them that there is virtually no hope, and they go away with a feeling of despair. For what is a poor man's life without one or two children? The only pleasure, the only *interest* they have in life.

And I cannot help smiling sadly when I think of another couple who were in the office the day before, but whose cry for help was of an entirely different character. They were married five years and had four children, and wouldn't I, for God's sake, give them something, so that they should not have any more. For the husband, who is a bank-clerk, is getting but a small salary, the wife's health has run down, and they simply can not afford to have any more children.

Why is nature so inconsiderate? People who would be quite satisfied with one or two children have half a dozen and must have recourse to contraceptives not to have any more; while other couples who are just dying to have one or two children can have none at all.

I had seen twenty-nine patients that day, but the other seventeen were ordinary cases of gonorrhea, syphilis, and impotence, and to describe them in detail would be repetitions and would render this article too long.

Of course, all disease is more or less a tragedy. But venereal or sexual disease is a double tragedy, for it generally affects another person besides the patient—and sometimes that other person, be it the husband or the wife, is a greater sufferer than the patient himself or herself. We could call venereosexual disease a triple tragedy, for, besides the husband and the wife it also affects the race; doing this by preventing children from being born or by afflicting the children that are born with disease and mental and physical inferiority.

There is still another element. A stigma of disgrace attaches to venereosexual disease which attaches to no other class of diseases. All other diseases are avowed openly and treated openly. The venereal patient alone must hide his trouble from his family, from his relatives, from his boarding-house keeper, his room-mate, from all, and this makes it so much more difficult to cure the disease properly.

Yes, venereosexual disease is a great tragedy, and we are in the midst of such tragedies every day of the year. And, while, seeing numerous cases, you necessarily grow somewhat callous, still, they do not fail to have their effect upon you. In spite of yourself you get weary, depressed, and you long to run away to pleasanter climes and to pleasanter thoughts.

Opportunity as a Therapeutic Expedient

By HENRY S. MUNRO, M. D., Omaha, Nebraska

DURING the past five years I have added more books to my library than during the previous eighteen years combined, to say nothing of the twenty or more journals that find their way to my office, weekly and monthly. In these publications are the recorded experiences of others, as gathered in hospitals and laboratories, at the clinic and by the bedside, at home and abroad—all of which information is invigorating, educational, stimulating, and wholesome. In these printed pages we find discussed serodiagnostic measures and laboratory technic galore; chemotherapeutic measures under various theories are described in such abundance and served in such attractive paraphenalia that one can but feel that we are living in the best day, the best year, the best century in the world's history. All of the achievements of ages past and gone are our heritage.

Eternity looms up before us with illimitable possibilities for growth, development, and achievement. The energy that sustains the sun and the innumerable planetary systems, the ever-changing seasons, the growing vegetation, the myriad forms of animal life, the restless tides of ocean, the grandeur of the mountains, the delicate coloring of the flowers that bedeck the hillsides, the opalescent hues that tint the horizon and the rainbow are ever present to sustain and invigorate us; and amidst these varying factors of our environment, where we see action and reaction, life and death, toil and achievement, we can but catch something of the inspiration of these omnipresent forces of nature, of which we are a part, and feel that life is well worth while.

We look upon the objective world about us, but our capacity to appreciate the beauty and grandeur of our vision must be gained by comprehending the work of our fellows and comparing it with what we see, in common with other forces of nature, in order that we may correctly maintain our relation to the composite universe, and thereby live in harmony with other forms of life.

Fallacy of the Doctrine of Congenital Criminality

One of the most inspiring books that has come to strengthen our efforts was the volume containing the symposium upon "The Physical Basis of Crime," presented at the thirty-eighth annual meeting of the American Academy of Medicine, held at Minneapolis June last, more particularly the "Study of 1000 Cases of Young Repeated Offenders," by Dr. Edith R. Spaulding, resident physician in the Reformatory for Women at South Framington, Massachusetts, and Dr. William Healy, director of the Juvenile Psychopathic Institute in Chicago, which showed conclusively that these investigators have found "no proof of the existence of hereditary criminalistic traits, as such." These authors further remark:

"Of course, we cannot absolutely deny such inheritance; but, judging by our studies, we feel that careful observations elsewhere will bring forward evidence rather against such a theory than in favor of it. On the other hand, through studies of the eugenists and advances in medical and psychological knowledge, crime will be found indirectly related to heredity in ways most important for society to recognize. *The underlying foundations of criminalism are the evils to combat.* As existing apart from definite and discoverable mental, physical or environmental causations of criminalistic behavior, we may regard the idea of bare criminalistic traits, especially in their hereditary aspects, as an unsubstantiated metaphysical hypothesis."

Another writer in this symposium, Robert H. Gault, Ph. D., associate professor of psychology in Northwestern University, and editor of *The Journal of Criminal Law and Criminology* (Evanston, Ill.), in his contribution to this symposium, says: "It is possible thus for the student to develop the helpful view that the abnormal, whether in conduct or not, is not separated by a hard and fast line from the normal; that there are almost infinite stages of gradations between the two, but no abrupt leap across a gulf between them."

This writer well illustrates the above quotation from his own pen by his next words in the same paragraph when he says:

"He need not and will not be befuddled by the hazy concept of the subconscious, which is the familiar refuge of the stalled tyro in psychologic research; the tyro who—in all honesty and unwittingly, be it said—breaks the rule of parsimony in scientific research. He anchors his explanation in something that itself needs immediately to be explained, if it

is to be accepted as a whit more valuable from the medicopsychologic viewpoint than the subjects of speculation in the old faculty psychology."

What conceptual construction does he offer as a substitute for the term "subconscious"? If his substitute thus—presto, change—becomes "science," is the central problem of the logic of science merely the problem of the relation between the fundamentally distinct types of hypotheses, i. e., between those which can not be verified or refuted through experience, and those which can be empirically tested?

We have no fixed theory of human knowledge. Knowledge is but an apprehension of facts and a description of those facts in terms that can be comprehended by human intelligence. The fact that the views set forth by the "tyro in psychologic research" have found such ample confirmation by the "rule of parsimony," or by the able contributors to this symposium, whether worded in the same terminology or not, or are arrived at by the same means of investigation, is sufficient justification for the effort put forth by a conscious observer to give to his colleagues an account of what he beheld with his own eyes in the larger school of human activities, where, after all, our theories and methods must be put to the test.

Whether the hypothesis is verifiable or refutable, matters not. It has served to show the connecting link between the normal and the abnormal, between processes of disease and the normal psychophysiological processes of the organism; or, to find the true unity—whatever that may be—wherein the pathological and the normal processes are linked.

As to whether such explanation for the observed order of things, as was given by the "tyro," has served a useful purpose or not, can be estimated by the statement that they have found a sympathetic response in the personalities of thousands of American physicians and proven to be of practical utility in their actual everyday work: and, furthermore, that this hypothesis has furnished a working basis for several books that have followed the publication of his monograph; that it is in no sense out of harmony with the mechanistic hypothesis in which the terms "ceptors," "mechanisms," "reflexes" or "complexes" have been employed, all of which terms and the theories by which these hypothses are made explicable have been accepted and utilized by the writer in the recent article published under his name and entitled, "The Correlation, Unification or Synthesis of Chemo- and Psychotherapy."[1]

In this connection, let it be further remarked that conceptual constructions, or hypotheses, which furnish premises upon which our deductions, or logical explanations for observed phenomena, are based, in all instances are merely tools invented to suit the necessities of the observer. Institutions, hospitals, laboratories, and dead-rooms are not essential to the man who has passed through these kindergartens of medical education; he regards them simply as he does outworn clothes or as toys employed in the days of his infancy but no longer an indispensable requisite to the activities of the growing man.

The New Educators

If medical education never goes beyond the bounds of medical school, institution, and hospital, its growth has been arrested, stagnation already has taken place, and dissolution is bound to follow. There are those of us who have broken loose from these hindrances. We are enjoying the privilege of making employment of our own brains, and, with no desire of becoming arrogant, we make no hesitation in saying that, until the results achieved in the actual clinical work in the various institutions of the world can surpass those of our everyday work as applied to all classes of professional endeavor, we refuse ever again to be followers. Efficiency is not a birthright, and the broad everyday world, wherever the activities of men and women are exhibited, offers opportunities for medical education that are not to be surpassed by any institution on the globe, if only we have passed the threshold of the trap of those educators whose environment is more restricted.

But the new-world view has become a well proven and accepted reality. Pathology is only physiology acting under abnormal conditions; or, as Virchow phrased it in the year 1847: "We have learned to recognize that diseases are not autonomous organisms that have entered into the body, that they are no parasites which take root in the body, but that they merely show us the course of the vital processes under altered conditions."

In referring to this expression of Virchow, Poincairé remarks: "And, if the famous principle in question is only stated with sufficient generality, it amounts simply to saying, in effect: A disease involves a change in the organism; then, if this change is subject to law at all, the nature of the organism and the

[1]Published in *The American Practitioner*, Nov. and Dec., 1913.

reaction of the organism to whatever it is that causes the disease must be understood, if the disease is to be understood."

The laboratory, the hospital, and the medical school are indispensable in helping us to isolate the bacterial and chemical poisons to which the diseased organism reacts, and they are indispensable for teaching purposes; and for these we bespeak the generous support of philanthropists, of the larger social organization, and of the legislative bodies of the individual states where our medical schools are located, in order that they may help these restricted toilers to do their work, for the sake of the incipient qualification of the uninitiated throughout the years to come.

But, for the factors of our environment by which the organism becomes disqualified for the responsibilities of normal citizenship—to the real cause of disease—we must look beyond the restrictions of the laboratory and the hospital.

The Broader Future for the Healing Art

In this broader field, beyond the reach of hospital and laboratory, there is awaiting the opportunity of the well-qualified physician of the future. To the medical man who finds life stale, flat, and unprofitable I would say: "Turn your attention in the direction of this broader sphere of action; learn to recognize the possibilities for individual help that can be given to millions of our fellow American citizens, who only need to 'find themselves,' to understand the true relation of cause and effect as regards health and disease, and to be taught how to use their potentialities of mind and body for the achievement of the highest possible degree of efficiency—*there* is the direction toward which scientific medicine is constantly, gradually, but surely, making its approach."

Disease is a misadaptation to environment —it matters not what be its terminological diagnosis—and to be qualified to give to each individual patient the help needed to maintain a sane mind in a sound body is to be the work of the physician which will, ultimately, bring the most satisfactory results. Herein is now the opportunity for the physician to be of real service; and in doing this service he will enable his patient to find his or her opportunity for a useful, happy, and efficient life.

There are millions of our American people who need the help that we can give them by educational and re-educational methods, used in conjunction with chemo-therapeutic agents, or not, as the individual case may require. Drugs, serums, vaccines, antigens, and antitoxins are in better repute today than they have been at any time in the history of medicine; and at the same time, their administration now is accompanied by more definite results, because their physiological action is better understood and the indication for them more clearly defined. All that we need is, to find some way of educating the laity to appreciate the necessity of coming to us in ample time to correct the incipient functional disorders; thus preventing the development of gross pathology, and in this manner to conserve their efficiency and save them from the inevitable consequences of their violation of the physiological and psychological requirements of health.

The time has come when the patient can come to the physician and ask, "Doctor, am I psychologically, physiologically, and physically right," and we are prepared to answer his question and to show him why, and, if he is not "right," we shall be qualified to give him the aid of our knowledge and thus to enable him to become right. This patient may have passed the diagnostic test of the laboratory and hold a certificate of freedom from diseases of parasitic origin, and, yet, be suffering from a condition such as characterizes any one of half the number of the diseases that last year gave a mortality roll of over ten thousand in the state of Nebraska.

The greater proportion of the deaths recorded from cancer, tuberculosis, "congenital debility," organic heart disease, diseases of the arteries, diabetes, apoplexy, Bright's disease, epilepsy, to say nothing of other physical and mental forms of disease, are due to the maintenance, by the victims, of a condition of abnormal psychology and pathological physiology that favors the development of these disease-conditions, and from which such patients so readily die; all of which could be successfully treated if only they consulted the well-qualified physician in time. Pneumonia is another disease that is possible only where the individual pathological chemistry makes a suitable soil for the invasion of the pneumococci—a condition easy of correction if such patients give us an opportunity to render them service before gross manifestations of disease are developed.

The Importance of a Rational Psychology

The conditions which lead to crime, suicide, murder, as well as to socalled insanity, and to death under the age of seventy or ninety years can be diagnosticated by psychological methods in conjunction with simple physical

tests such as can be made in any thoroughly qualified physician's office.

The great majority of conditions which physicians are called upon to treat—fully nine-tenths of them—can be comprehended only by understanding the psychology of each individual patient; but I do not mean the "sexual-repression" psychology nor such "analyses" as have recently been published from some of the enthusiasts of the Freudian school.

I do not care to enter into the controversy that at the present time is being so fiercely waged over psychanalysis, more than to say that the father-mother complex is the determinant, the most weighty determinant, of the adult personality, and that I am becoming less and less inclined to take cognizance of physical sexual traumas in the etiology of the psychoneuroses, save where such physical habits or perversities of childhood project themselves up into the adult life. I can accept no "psychology" not in harmony with all other branches of physical science, nor with other well-proven branches of applied medical science and art. To my mind, true science can never be at war with any of its votaries, though it ever must remain intolerant of hypotheses constructed for selfish ends.

The Pressing Duty of Society

"Opportunity" is valuable as a therapeutic expedient only as patients come to us in time to prevent the inevitable consequences of their neglect to conform to the life of a sane, normal, efficient human being before gross pathology is evidenced. Health is a natural condition and the rightful heritage of every human being, save those who are constitutional inferiors; the line of demarcation depending upon the results of the intelligent treatment of the individual case, and not merely upon the Binet-Simon mental-scale "test for twelve years of age."

Every boy and girl should be examined by a competent medicopsychological expert before leaving the public schools, or at about the age of sixteen, and equipped to find and fill a place of usefulness in the world, regardless of wealth or social position. They may not need the emoluments that come as the result of useful endeavor, but they can ill afford the loss of the self-development that comes from the free exercise of one's faculties, nor the happiness that results from serviceable endeavor and successful achievement. Even they of the aristocracy need to have their opportunity for becoming doers in the world of thought and action.

Of the educational factors at work today, which in reality inhibit normal thought and action, and of the devitalizing and personality-suppressing influence of such "education" by which individuals are deprived of the opportunity of becoming sane, normal, intelligent men and women, space will not permit me to write. Suffice it to say that science has made only the slightest impress upon the social life of our time and that the most harmful factors in the evolution of American manhood and womanhood are to be found in the educational and religious influences prevalent throughout our land—influences that stand in open antagonism to the factors that make for sanity, for efficiency, and for an equal opportunity in the world.

Every human being born upon American soil should have an opportunity to become a normal, intelligent, useful citizen. Science, education, and democracy should give him that opportunity, and our commonwealth should give him a chance for honest toil by putting an end to the existing monopoly upon the raw products of industry, before our social organization can make the merest pretense of being civilized. Will our legislators hear the cry of the downtrodden millions or will they continue to be the allies of the vested interests in withholding from the children of this great commonwealth their opportunity for an efficient and useful life?

When a group of cells become parasitic, as in the case of sarcoma or carcinoma, jeoparding the life of the cells of the individual organism, we apply the knife. Shall we not be equally justified in giving the individuals of the larger social organization an opportunity to become efficient citizens or should we merely endeavor to heighten the immunity of the host? In either case, the ultimate result is bound to be the same. If we apply the treatment of "Science, Education, and Democracy," we shall save the lives of millions. If we mean to be "physicians," *now is our opportunity.*

Cactus Grandiflorus

A Neglected Heart Remedy

By FINLEY ELLINGWOOD, M. D., Chicago, Illinois
Editor of "Ellingwood's Therapeutist;" author of Ellingwood's "Materia Medica and Therapeutics," and "Treatment of Disease"

EDITORIAL NOTE.—Professor Ellingwood has promised us a series of papers upon American vegetable remedies. Those who know his work will not miss one of these articles. Next month he will discuss ***Macrotys****.*

CACTUS grandiflorus has probably been the object of more diverse opinions during its investigation than any other remedy of the vegetable materia medica. This the editor of CLINICAL MEDICINE has had opportunity to learn, in part from his own experience. It is the consensus of opinion that this is due to the varying character of the methods used in extracting its medicinal properties, and to the condition and character of the plant selected. The truth concerning its clinical action has gradually evolved from the experiments and clinical observations of thirty years. These were made primarily by the Homeopathists, immediately followed by those of the Eclectic school, and finally, by physicians in general, who are unprejudiced in their observations and willing to accept that which is good, without regard to origin or patronage.

Those clinicians who have carefully and persistently *used* the entire list of heart-remedies, all made from reliable herbs (if so derived), unite in the belief that, as a tonic and permanent restorative of normal conditions; for breadth of action; for specific directness; for reliability and smoothness; and for general trustworthiness, cactus takes precedence, as an individual remedy, before the others. In reasonable doses, it does not cause irritation, it seldom exercises any toxic influence, is admirable in its action, and is invaluable when clearly indicated.

I must be forgiven if, after thirty years' constant use, I have formed conclusions concerning its action that differ in many respects from those advanced by other writers, who have, in large part, quoted their observations from writers and from the briefer experiences of those who have used it empirically, rather than rationally and physiologically. I must also be excused for taking some of the statements herein made, from some of my own previous writings.

Physiological Action

The most conspicuous influence of this remedy upon the heart is its nutritional influence—a smooth, kindly, permanent influence in restoring tone to the heart and in strengthening its force, with absolutely no irritation if taken under proper indications, and promoting normal functional activity, while devoid of any undue influence whatever.

It certainly increases the musculomotor energy of the heart; it elevates arterial tension, and increases the height and force of the pulse-wave; and it accomplishes this result by increasing the action of the heart and by a steady increased tonicity of the spinal-motor centers, thus improving their activity and improving the general tone of the circulatory apparatus.

I have previously stated that cactus stimulates the vasomotor centers. In the strictest sense of the word, I doubt a directly stimulating influence; rather it is that of directly and permanently improved nerve-tone. Furthermore, over and above its action upon the heart direct, an improvement of tone in the central nervous system is apparent at times when the remedy is given for its nerve-tonic effect alone, where the heart is weak, but not sufficiently weak to demand direct medication.

Numberless cases of this character have come under my observation, when patients suffering from exhaustion improved so rapidly that it was plainly apparent that some powerful nerve-tonic influence was at work; and this influence many times could not possibly be attributed to any other agent.

Cactus, thus, is *the* heart-tonic *par excellence*, in that it produces increase of action and restoration of function from actually increased nerve-tone, in this way inducing an improved nutrition of the entire nervous and muscular structures of the heart. It produces no irritation of the heart muscle as does strophanthus, nor does it in any case produce any irritation of the stomach; neither is there any cumulation of influence, to appear unexpectedly and inaptly at other times. It exerts both a direct and indirect influence also over the sympathetic nervous system, regulating its action, and restoring normal action there, whatever the perversion.

When the heart is enfeebled, the action of the remedy upon the cardiac plexus will

materially regulate activity in its normal functioning. Furthermore, it has been found that the remedy increases the contractile power and energy of the heart-muscle, through the intracardiac ganglia and accelerator nerves. As I have stated, it certainly improves the nutrition of the heart, because, if taken for a prolonged period, it will remove the entire train of progressive valvular murmurs that are occasionally found to result from protracted debility.

To illustrate this statement. I have now a patient, who, though still under my observation, has taken no medicine for the heart for more than a year, and of whom it cannot now be discovered that she has any heart trouble. This patient three years ago suffered from cardiac dilatation from primary endocardial inflammation following chronic rheumatism. She would have suffocating spells, with palpitation and difficult breathing so severe that it would seem as if there were immediate danger of a fatal termination.

I gave this patient but very few remedies. Macrotys and cactus at first, the former remedy for its action upon the rheumatic condition and to assist the influence of cactus upon the unstriped muscle-fiber of the heart, as its specific influence is exercised directly upon the muscular structures and especially upon the involuntary muscles. Later I gave gelsemium because of a peculiar irritability present in the action of the heart, and in the course of the next fifteen months I prescribed, as indicated, iris for a few weeks at a time, and lycopus. The only remedy that was used continuously was cactus.

Before I discontinued this treatment, and when the patient's heart sounds were almost entirely absent and the tone was such that there was no danger in such a course, I advised a series of baths at Mudlavia, to rid the system of the toxins, which were liable to cause a return of the difficulty. This was an advantageous course, and it was repeated a year later, since which time no remedies have been given. This patient is now in excellent health and abnormal heart sounds have been entirely absent for probably more than fifteen months.

This is one of many cases which have convinced me of the value of cactus grandiflorus in completely curing certain heart troubles.

Specific Symptomatology

The indications which more directly point to the necessity for the use of cactus grandiflorus are: functional disturbances of the heart, weakness of the heart, associated with feeble irregular pulse, some dyspnea, and a sensation of weight or oppression in the chest; all of which conditions depend upon atonicity or enervation. A sensation of construction as of a band around the heart or around the chest is quite commonly observed. As stated, all these conditions depend upon a lack of tone.

If from any cause the patient's heart is rapid and *irritable* from conditions which temporarily result from a stimulated condition or a hypertonicity, the remedy must not be used. This, I think, is the only contraindication for cactus that I am plainly cognizant of. The remedy could not, under these circumstances, but increase the discomfort, and it may produce temporary symptoms that are actually alarming. Fortunately this is seldom found; and, yet, it is very necessary for the prescriber to bear these contraindications in mind.

Therapeutic Action of Cactus

There is almost a consensus of opinion to the effect that cactus is indicated in functional derangements only. As illustrated by the case above narrated, I have grown into the opinion, especially during the past fifteen years, that we are justified in claiming excellent results for the use of this remedy, not only in cases similar to the one described, but especially so in youth and early childhood.

There are many causes, at this period of life, that disturb the heart's action, and produce symptoms that most authorities compare with those of a similar nature in adults. When, however, we come to study the actual pathology in the two cases shown by similar symptoms, we find, occasionally, a wide difference. This is now recognized by most authorities. Those evidences appearing in children are more transient, are subject to temporary conditions, and are altogether more amenable to our specific treatment. This takes into consideration the fact that due attention must be paid to the susceptibility, on the part of children, to the action of directly prescribed remedies, and to the further fact that the plant drugs seem to exercise a very harmonious action in the system of the child.

Cactus in Heart Troubles of Childhood

Concerning the pathology of childhood, I am inclined to think that our present methods of physical exercise, both at home and in school, are altogether too strenuous. I have found in many children mild valvular weaknesses and regurgitant sounds, murmurs, and other similar conditions, which I am confident have been brought on by overexertion.

These lesions will remain and will become permanent unless the child is relieved from the violence of this exercise, or restrained. With rest and systematic oversight as to physical exertion, together with the correctly adjusted use of cactus, these conditions quickly yield. So quickly, indeed, that the prescriber sometimes questions the correctness of his diagnosis.

Rheumatic conditions in childhood, as every reader will have observed, result quickly in heart complications. These complications also follow all the infections, particularly the staphylococcic and streptococcic infections of the tonsillar complications of rheumatism. They are also common with chorea, besides following acute inflammations of other types.

In these cases, cactus has an influence that, while not at first conspicuous, will be plainly apparent if steadily used; and the use of this mild, efficient and always accessible remedy grows upon the prescriber as his confidence is established by the desirable and happy results obtained from it.

A Striking Illustration of Cactus Action

One of the most startling illustrations of this action of this remedy I could present was in the case of a boy who, following an exceedingly severe attack of measles, developed endocarditis and double pneumonia. The boy's father refused to employ a physician until he seemed to be at death's door. Cyanosis was general. The difficulty in breathing was most agonizing; the eyes fairly protruded from their orbits; the temperature varied from 102.5° to 104.5° F.; and the pulse was absolutely uncountable. Consolidation was very extensive.

I saw the boy at 4 o'clock p. m. and thought he could not live until morning. I encased his chest in a hot wet dressing, which was persisted in until I called at 10 o'clock the next day. I administered only three remedies. Belladonna to equalize the circulation, was given every hour in sufficiently large doses to exercise its physiological effect. I then combined aconite and cactus—1-3 of a drop of the tincture of aconite only, with 1 1-2 drops of the fluid extract of cactus, every hour.

To determine the rapidity of the pulse, which, as stated, could not be counted, I timed the movements of my hand with a pencil to the beating of the pulse and made dots upon a sheet of paper for fifteen seconds, then counting the dots, I estimated that it ran over 200 beats per minute.

The next morning the change was indeed a most happy one. The pulse was 120, uniformly smooth, and sufficiently strong. The cyanosis had disappeared, and the respirations (36 per minute) were steady, regular, and satisfactory to the patient. The recovery of this patient was prolonged by other complications, but the conditions of the heart improved steadily under the action of cactus, properly combined with the other required remedies, and ultimately every sign of serious disease had disappeared.

This is only one of a number of instances in my experience that prove beyond any question of doubt the fully restorative power of cactus in the diseases of childhood. Given in the diseases of old age, its influence is more quickly shown on functional disorders; but its characteristic nutritional influence is quickly apparent, especially where the pulse is very feeble and where there seems to be general feebleness of all the organs, directly traceable to the nervous system, and accompanied often by mental evidences, also.

In these cases, cactus is a very competent nerve tonic and, accompanied with phosphorus in proper doses, or with a carefully selected phosphate, or with avena sativa, or, as I have found in very many cases, with strychnine arsenate (from 1-120 to 1-60 of a grain every two, three or four hours, to exercise a gradually strengthening and restorative effect) the general influence of the remedy is very happy. Because of the presence, usually, of chronic conditions, the completeness and permanency of its influence are of course not so pronounced.

Its Sedative Influence

I have found cactus to exercise an excellent influence, in conjunction with aconite, to control the pulse and temperature in feeble patients, especially in the later stages of acute but protracted disease, where there is a feeble pulse, rapid weak heart, and weak and exhausted nervous system. The sedative effect here is direct.

So marked is its influence in strengthening the action of the heart and in improving the nutrition of the brain, thus improving the circulation, that it can be prescribed with great benefit in neurasthenia. There need be no distinct evidence of heart derangement, except feebleness. It is especially in those cases of neurasthenia where there is functional derangement of the heart, with a sensation of restriction or a tight band around the chest, that the remedy is specifically indicated, and where, with this symptom, there is feebleness, nervous irritation and

nervous excitement, it acts as a special sedative.

Contraindications to Cactus

If in addition to nerve irritation there should be an apparent exaltation of nerve-force, a temporary excess of strength in the cardiac action or increasing arterial tension, as just stated, cactus is contraindicated. The conditions of excess or of defect of nerve-force and heart-power are, thus, the two conditions that, in my experience, seem to be most necessary to be considered in prescribing cactus, as this enables us to determine the indications or the contraindications. These must especially be considered in ordinary cases of palpitation. I have recently had a case in which, from an error in determining this fact, I materially increased the trouble temporarily by prescribing cactus.

Some of the Uses of Cactus

The most common cause of functional irritability of the heart, perhaps, is gastric or gastrointestinal irritation. I learned long ago to depend upon this remedy as a regulator of this form of irritability, not neglecting to neutralize excessive acidity or to secure a normal condition of the gastric and intestinal juices, and then prescribing this I have seen only satisfactory results.

A very happy effect is obtained by using this remedy in the latter stages of nearly all severe acute diseases, at the beginning of convalescence. In cases of pericarditis, as well as in any form of carditis, as above mentioned, careful prescribing will adjust it most satisfactorily.

In Place of Digitalis

In pneumonia, it will fully take the place of digitalis, with a greatly broadened field, except perhaps with the single exception that there are times when heart failure in the latter stages of pneumonia occurs so suddenly that a large dose of digitalis is at once needed; but, with this exception, if the prescriber has no confidence in treating pneumonia unless he is giving something to support the heart, he can produce no harm whatever in prescribing cactus early. This certainly cannot be said of digitalis. It, thus, nourishes the central nervous system and the muscular structure of the heart, preserving these organs against the possibility of any sudden giving away.

There is a form of headache that is characterized by oppression in the top of the head, nervousness, and functional disturbances of the stomach and other organs, and which is relieved by cactus. This is common to ladies at the menopause and results from sympathetic disturbances within the pelvis. At this time there also occur hot flushes and other disagreeable evidences or results of the climacteric, which likewise will yield quickly to cactus if given in small doses frequently repeated.

In cases of melancholia, nervousness, with irritability of temper, hypersensitiveness, vague fears and fancies, and the over-acute imagination that often is present at this period, the remedy will be found to be a good one, especially if combined with hellebore, at certain times, or with small doses of hyoscyamus if there be insomnia, or with pulsatilla if there be fear of impending danger.

The Heart of the Athlete

We do not, at present, have to contend with the bicycle-heart, but are confronted by a similar heart condition, brought on by excessive athletics, as also by the tobacco-heart of the cigarette-fiend, or of the inveterate smoker or that following masturbation or the use of alcohol. All of these yield to this remedy if dosage is correctly adjusted.

In hysteria in unmarried women or in that of early life, there develop a number of the conditions that yield to cactus if properly combined with the other indicated remedies. It seems to restore to a certain extent the function of the pelvic organs, while promoting a sense of general well being. In the male, if cactus is combined with avena sativa or with staphysagria, impotence is overcome, any results of dissipation will disappear, and all the organs of the body will show an improved tone.

One of our observers has used this remedy for many years for correcting subnormal temperature, and I myself have had considerable experience with it in this direction. There will be encountered a few such cases that are not influenced by it; many patients, though, will show improvement after a day or two and ultimately will recover completely, exhibiting a normal temperature and freedom from previous minor symptoms of heart derangement that might have been present.

As To Proper Dosage

I have never seen toxic effects following the administration of this remedy when it was properly indicated. Foreign authorities claim that 30 drops of a strong tincture

may be given at a dose. I myself never have given above 5, but 2 or 3 drops every two hours is a better method of prescribing it than 6 or 8 drops three times a day, as the action of the remedy is somewhat evanescent, so that doses must quickly follow each other in rather rapid succession. In children, from 10 to 30 drops in a 4-ounce mixture, a teaspoonful every two or three hours, will constitute proper dosage.

Concerning the pharmaceutic concentrations of cactus and of other vegetable remedies, I do not believe that the alkaloids or other forms represent in every detail the action of the plant drug. Consequently ,we Eclectics find it necessary to study the clinical action of the active principles independently of any study we have made of any given galenic preparation that is derived from that whole plant.

The concentration of cactus, known as cactoid, however, is not alkaloidal in character, and I think that as nearly as does any other one galenic this concentration represents the entire plant drug. In fact, judging from my observations, cactoid corresponds very closely with the alcoholic tinctures of cactus—so closely, indeed, that I should have no hesitation in prescribing the granules of cactoid, as I have specified above, in place of the carefully prepared fluid preparation of the drug.

Furthermore, I believe that correctly made standard concentrations of this character and the resinoids, such as macrotoid, letandroid, irisoid, besides some others, can be depended upon to represent more fully than an alkaloid would the exact action of the whole plant, because in these concentrations there is not that separation of active principles from other medicinal principles as is the case with the alkaloids.

Ambulatory Treatment of Fracture of the Patella

By BENJAMIN H. BREAKSTONE, B. S., M. D. Chicago, Ill.
Professor of Surgery, Bennett Medical College; Attending Surgeon, the Jefferson Park Hospital

EDITORIAL NOTE.—This brief but valuable paper is a further contribution to Doctor Breakstone's series on "Everyday Surgery," which has proven of such exceeding interest to the "Clinic" family.

A PAPER of nature similar to this one was read by me before the Alumni Association of the Illinois Medical College in 1899. This by way of introduction.

The patella is a sesamoid bone and is contained within the tendon of the quadriceps extensor muscle and, therefore, forms part of that tendon. Thus, the patella itself is outside of the knee-joint, still, is very close to it, being separated only by a ligament and the posterior surface of the tendon of the quadriceps extensor. Over the patella lies a sac (known as a bursa) containing serous fluid which, when overdistended with fluid, causes a condition known as housemaid's knee. In nearly all fractures of the patella caused by direct violence, this bursa is injured and then very often is filled with blood.

A fracture of the patella is one of the very few fractures in which we have a real transverse break, although there may be many other varieties. If the fracture is a simple one, the method of management here outlined is by far the best. Even if the fracture is compound and not multiple I prefer this method. We certainly get better results with this method than we do either by wiring or by using the Lane plates.

The x-ray of a fracture of the patella must be taken by an experienced man, as, being a sesamoid bone, it does not throw as clear a shadow as the other bones, which contain more calcium salts.

The treatment I have been employing with great success for the past sixteen years (and as described in the paper of 1899) is as follows:

Place the patient on his back in bed, with the affected limb extended and elevated at an angle of about forty-five or more degrees with the body. This relaxes the quadriceps extensor muscle. Pull the upper fragment down toward the foot as far as possible and have an assistant hold it there while you apply an adhesive strip snugly tight around the lower end of the thigh, just above the superior margin of the patella. This holds the upper fragment down and prevents the quadriceps extensor from pulling it up again. Then pull the lower fragment up (which is always easier, as there is only a tendon to deal with) and apply an adhesive strip, likewise, around the upper part of leg just below the lower margin of the patella.

Now, having the proximal and distal fragments accurately approximated, the next step is, to prevent a lateral movement. This

is done by applying an adhesive strip from 8 to 11 inches long and about 1 to 1½ inches wide, according to the size of the patient's limb, first around the upper fragment and then likewise around lower fragment, in conformity with the margins of the patella. This induces a thorough fixation. Then, to prevent effusion, a cotton compress is put on over the patella and, to reinforce the adhesive plaster, a roller bandage is applied from the middle of the leg to the middle of the thigh, with a posterior splint, to prevent flexion of the knee-joint. If there is an extravasation of blood, that must first be emptied with a trocar.

The advantages of this procedure are these:

1. No need of anesthetic.
2. Simplicity.
3. No scars, if fracture is simple.
4. No danger of infection.
5. One can do it with any available person assisting.
6. Results are as good as with any other method, if not better.

The patient is kept in bed and treated on general principles from three to six days, after which time he is allowed to get up; but the dressings are to be kept up for several weeks longer. No claim is made that this treatment is applicable to all kinds of fractures of the patella, but the following conditions are necessary for success.

1. The fracture must be a simple one.
2. The quadriceps extensor must not be atrophied, thereby preventing approximation of the fragments.
3. If great swelling and contusion exists, treat that first.

IN SOME FAR PORT

By JOHN RHUDDLAU

Moments there are when o'er the soul
Great waves from mystic oceans roll,
Or seem to roll, and bring with them
Strange weeds and many a starry gem
From shores not found upon the chart
Either of mind or of the heart.
And so across the wondrous realm
Of Time and Tide we hold our helm
Upon its course; nor doubt the dream
Nor fear the menace of the stream,
Hoping the Power that bids man sail,
In some far port, will cry him Hail!

Refraction for the General Practitioner

By THOMAS G. ATKINSON, M. D., L. R. C. P. (London), Chicago

Author of "Essentials of Refraction"

EDITORIAL NOTE.--Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Write him for any details you do not understand fully.

More About Astigmatism

TO JUDGE from the communications I have been receiving from various quarters, in response to my preceding article, I do not seem to have succeeded in making the true nature of astigmatism fully clear to my readers—which, indeed, is not surprising to me, when I recall the difficulty I myself experienced in getting a proper concept of this condition, simple as it is. The trouble, I think, lies in its very simplicity. Most of us are looking—at least I know I was—for something very complex in the way of solid mathematics.

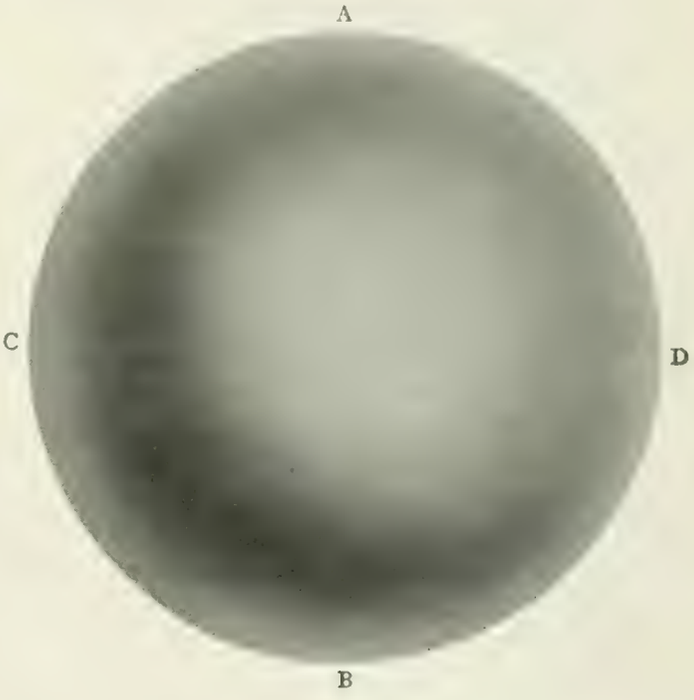
The astigmatic eye, as I already have explained, is simply an eye in which the spherical curvature of the cornea (or sometimes of the crystalline lens) has been flattened in one direction and bulged in the other. There really are only two meridians, so far as this condition is concerned—the meridian in which the sphere is flattened, and the one in which it is bulged.

If you will take a hollow rubber ball or an orange, or some other soft spherical body, and, putting your two hand-palms against it at two opposite poles, will squeeze it so as to shorten the diameter between these two poles, you will see that the curvature of the body has become more convex in the direction in which you have shortened it. Now, at the same time that you are shortening the diameter between the two compressed poles, you are, of course, lengthening it in the meridian at right angles to the direction in which you are compressing; and the curved surface around this lengthened meridian is less convex than normal.

Referring to the figure of the sphere shown here (A B C D), if you compress it from A to B, then the curvature of the sphere from A to B is more convex than usual; at the same time, the circumference from C to D becomes longer and the curvature from C to D less convex than usual. It makes no difference in which direction you may make the compression represented by A B. In the illustration it is made vertically. But whether it be made vertically, from side to side or catercornered (obliquely), always the direction in which the sphere bulges will be exactly at right angles to that at which it is compressed.

The Optical Meridian Defined

Now, then, if we consider this sphere as a refracting body, it is plain that in this compressed condition it can not, like a perfect sphere, focus all the rays entering it at one point. When the focus is adjusted for the most convex curvature, it is out of adjustment for the one least convex; and conversely.



And this is the condition of the astigmatic eye. It is not a question (as I find many of my correspondents trying to figure out, exactly as I myself tried to figure out for a good many years) of one, single, meridian; that is, considering a meridian as being represented by one of the lines on the schematic fan. For—and this is the point—a meridian is not one of the radii of a sphere; rather, a meridian is a *direction around the sphere.* So, in the case of the eye, a meridian is a *direction across* the cornea.

Astigmatism, therefore, is an error of curvature clear across the cornea, and all over the cornea, *in the direction* indicated by the fan-lines that are black and faint, respectively.

These simply indicate the direction in which the cornea has been compressed and bulged.

Sometimes the eye the cornea of which is thus distorted is a long myopic eye, in which both the focus of the most convex and that of the least convex meridian fall inside the retina; in which case the astigmatism is *compound myopic*. Sometimes it is a short hyperopic eye, in which both the focuses fall beyond the retina, and in that case it is a *compound hyperopic* astigmatism. Sometimes, again, the compression and bulging of the respective meridians make one focus fall inside and the other outside the retina; then it is a *mixed* astigmatism.

How to Correct Astigmatism

As to the correction of an astigmatism, I find much the same confusion still prevailing, in spite of my explanation; so, I will try to make that a little clearer, too.

Manifestly, we have only two directions of abnormal curvature to correct in any eye. If we take any one direction of curvature and make it normal, and then make the direction at right angles to it normal, we have made the eye a perfect sphere. So, in astigmatism, we have to concern ourselves with only the two chief meridians; namely, the direction of curvature in which there is flattening, and the direction of curvature in which there is bulging.

Having found these two chief meridians (by the methods described last month), the rule is, always to correct the *least convex* curvature, by means of a *plus* cylinder equal in strength to the difference between the two curvatures. This, naturally, brings the focus of this curvature forward to coincide with the focus of the other curvature (wherever it may be), and makes a spherical error of it, equal to the error of the curvature which we did not correct. Then a spherical lens of this strength will take the two foci to the retina.

Three Important Rules

The three rules, therefore, for correction of astigmatism, are as follows:

1. Correct the *least convex* curvature, i. e., the one that requires the most plus lens to make it normal.

2. Correct this curvature with a *plus cylinder* equal to the difference between the two curvatures.

3. Complete the correction with a sphere, of strength and curvature equal to the uncorrected curvature.

Example *a:* 90 curvature requires plus 2 to make vision normal; 180 requires 3 D. Correct the 180 curvature, because it is the least convex (requires the greatest plus to make it normal). Correct it with a plus cylinder equal to the difference between the two, i. e., plus 1 D. axis at right angles, i. e., at 90. Then complete with a sphere equal in strength and curvature to the uncorrected one, i. e., a plus 2 D. sphere.

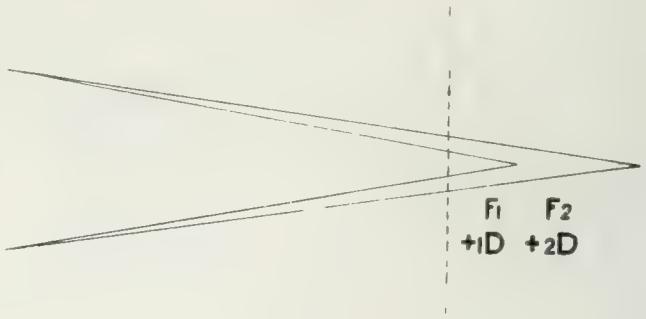


Fig. 1

Example *b:* 90 curvature requires plus 1 D.; 180 requires minus 1.50 D. Correct the 90 curvature, because it is the least convex. Use a plus cylinder equal to the difference between them, i. e., a plus 2.50 D., axis at 180. Complete with a sphere corresponding to the uncorrected curvature, i. e., minus 1.50 D.

Example *c:* 90 curvature requires minus 1 D.; 180 requires minus 1.50 D. Correct the 90 curvature, because it is the least convex (takes the greatest plus lens). Correct with a plus cylinder of the difference between them, i. e., plus .50 D., axis 180. Complete with a sphere corresponding to the other curvature, i. e., minus 1.50 D.

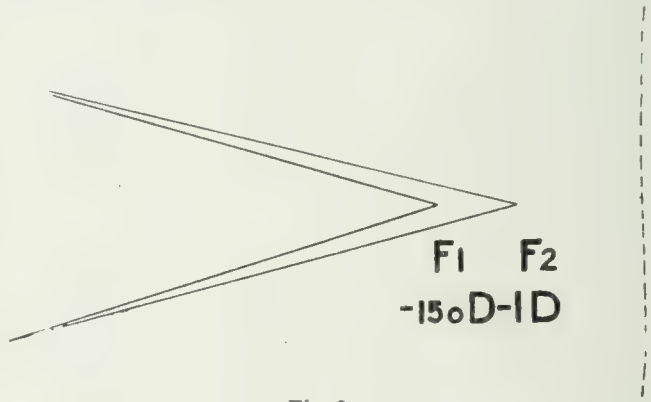


Fig. 2

Let us make this still more plain by means of diagrams. In Fig. 1, both curvatures focus beyond the retina; that is, they are both hyperopic. One (F1) is hyperopic 1 D., the other (F2) is hyperopic 2 D. The rule is, to bring the backmost focus forward to coincide with the foremost; never to take the foremost back to the backmost.

Now, then, a plus cylinder of the difference between F1 and F2, i. e., of 1 D., will bring F2 up to F1. Now both curvatures are

hyperopic alike, to the extent of the uncorrected curvature F1, and a sphere corresponding to this, namely of plus 1D, will bring both foci to the retina.

In Fig. 2, both curvatures are myopic, their foci falling within the retina, F1 being 1.50 D. myopic, F2 being 1 D. myopic. In this case, we correct F2, because it is the least convex. A plus cylinder of the difference between F1 and F2, i. e., of 0.50 D., will bring F2 forward to coincide with F2; then a sphere equal to F1 will take them both back to the retina, namely, a minus 1.50 D.

Once more. In Fig. 3, one curvature is myopic, its focus falling inside the retina; the other is hyperopic, its focus falling beyond the retina. F1 is 1 D. myopic, F2 is 1 D. hyperopic. In this case, we correct F2, using a cylinder equal to the difference between them—which, in this instance, really is the sum of the two with the sign changed, i. e., plus 2 D. This, as you see, will bring F2 clear forward (overcorrecting it), to coincide

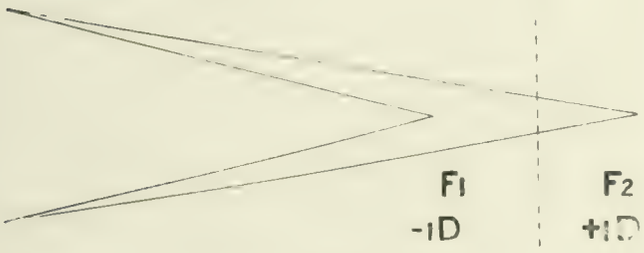


Fig. 3

with F1, making them both minus the same as F1. A sphere corresponding to F1, i. e., of minus 1 D., will then carry them both back to the retina.

Thus, the three rules I have given work out correctly every time. Even where one of the curvatures is normal, as in Fig. 4, if that normal curvature be the least convex of the two, we actually correct the normal curvature with a plus cylinder that will bring it forward to coincide with the myopic one, and then carry them both back to the retina with a minus sphere.

Thus, in Fig. 4 we do not, as might be supposed, carry F1 back to F2 with a minus cylinder of 1 D., but we bring F2 forward to F1 with a plus cylinder of 1 D., and then take both back again to the retina with a minus 1 D. sphere. But where one curvature is normal, and the other is the least convex, as in Fig. 5, then, of course, we simply bring F2 up to F1 with a convex cylinder, and as both are now on the retina, the correction is complete.

In my article on the retinoscope, I promised to say more, at some future time, on the estimation of astigmatism by this method.

When we make an examination of the eye with the retinoscope, we generally begin by shadowing the horizontal meridian; that is

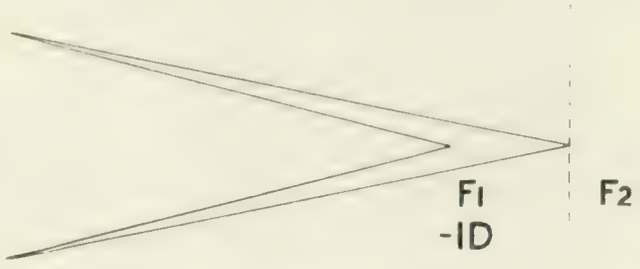


Fig. 4

to say, we begin by tilting the mirror laterally, from side to side. If we find an error in that direction, we begin to put on plus or minus lenses, as the case may be, to correct it.

As we proceed in this way, there are two or three things that usually warn us that we have an astigmatism to deal with. One of these is that, as we approach more and more nearly to the correction of the meridian we are correcting, a band of light stands out in the eye, with its axis corresponding to the axis of error. Another is, as already said, that, as we tilt the mirror to and fro, moving the shadow from side to side, the edge of the shadow appears oblique instead of straight up and down. Still another is, that the shadow does not move with equal rapidity on both sides; one moves more rapidly and is more cleancut than the other.

Both the band of light and the oblique edge of the shadow give us a clue to the axis of the astigmatism. Having found the two chief

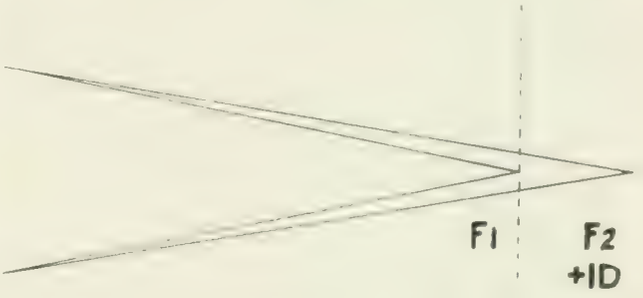


Fig. 5

meridians in this way, we simply shadow them separately, first one and then the other —just as we shadowed the one meridian in spherical errors—and get the two results. Then we calculate the cylinder and sphere to be used in correction, on the same principle as described under the subjective method.

Suppose, for example, that as we shadow the horizontal meridian, we find the shadow moving against the mirror, taking more than 1 D. to reverse it. This eye is hyperopic in this meridian. As we keep mounting plus lenses to correct it, we finally see a band of light appear in the pupil, with its axis upright; this remaining there after we have fully corrected this hyperopic meridian. Then we know we have an astigmatism, in the horizontal and the vertical meridians, and we proceed to measure the vertical meridian, by tilting the lens up and down instead of from side to side, until we correct this upright meridian.

Now we have the correction for the two chief meridians; and we prescribe our cylinder and sphere in exact accordance with the three rules above laid down.

Suppose, again, when we begin shadowing the horizontal meridian, that the shadow, instead of being upright, is oblique. Then we know we have before us an astigmatism, of which one of the chief meridians lies in the direction in which the shadow is tilted. Consequently, we stop shadowing the horizontal meridian, and proceed to measure the chief meridian of the astigmatism, by tilting the mirror at right angles to the edge of the shadow. Having found the error in that meridian, we shadow the one at right angles to it; then calculate our correction as usual.

The Care of Milk in the Home

By CHARLES F. LYNCH, M. D., Terre Haute, Ind.

MUCH of the money expenditure by our large municipalities in an effort to ensure a pure milk supply will remain a more or less misdirected effort until some appropriate method is adopted for educating the general public as to the proper care of the milk in the home. What is the use of passing drastic ordinances compelling the dairymen and milk-dealers to have proper sanitary conditions surrounding the production of the milk if this same milk is not properly cared for after it is delivered to the ultimate consumer?

Before any benefit can result from such legislation, the people must be awakened to the fact that milk can be just as easily contaminated after it has been delivered to the home as before it leaves the hands of the dairyman or city milk-dealer. The belief is only too common that, if the milk is clean when it is received, it can be subjected to any kind of conditions in the home without harm.

Carelessness in Handling Milk

It is a frequent scene, especially in our cities of 5000 to 25,000 population, to see any and all kinds of vessels—crocks, pans, buckets or open dishes—standing on the front porch all night, to receive the milk from the dealer's wagon in the early morning. Occasionally these vessels are provided with close-fitting covers; ordinarily, however, they are left unprotected. As a result, when the milk is poured into the vessel by the dairyman it receives a liberal contamination of dust and dirt, all heavily laden with various breeds of microorganisms. Very often this milk will stand several hours exposed to further additions of dust and dirt, while the warm rays of the morning-sun supply ample incubation-heat for the merry multiplication of the noxious germs. By about 8, possibly not until 10 o'clock, the milk finally is removed from its exposed position and taken into the house.

It may now, perhaps, be strained, to remove obvious particles of dirt or any hungry fly who may have been so unlucky as to get beyond its depth while purloining his morning meal. As a rule, however, large particles of dirt are simply removed with, or without, a spoon, and in like manner the flies. It is not understood by the people that the presence of these gross particles of dirt is of very minor importance in comparison with the myriads of bacteria that have been carried into the milk by it.

If it is hot summer weather and the family keeps an icebox, the milk may be crowded into this receptacle together with cheese, meat, cabbage, butter, and miscellaneous other articles, there to absorb odors and gain further contamination of course. If the chest is sufficiently cool, the reproduction of the bacteria may here be temporarily stayed in a measure.

However, in the home where the purity of the milk is most essential, that is where one or more children are dependent upon the milk as a principal article of diet, the icebox is a comparatively infrequent luxury. The milk-crock is simply brought in and stood on the kitchen-table or a convenient window-sill and the contents are dipped out with a not

overly clean cup as needed. During the regular daily household routine, when the floors are swept and the air is filled with bacteria-laden dust, the milk is covered over with a film of dirt, the same as the surrounding furniture. The furniture later is dusted off, but only too often the milk even now is left uncovered, to absorb more filthy contamination. And all the while the bacterial flora goes merrily on with its process of prodigious proliferation.

The Milk Change is Not Observed

Unhappily the physical properties of milk are such that it does not reveal by any obvious change the nature or extent of its contamination. These deleterious results are shown most frequently in their first noticeable manifestations as a profound gastrointestinal inflammation on the part of the child using it as a food.

In those cities which are fortunate enough to possess an ordinance requiring the selling of milk in closely capped bottles, conditions are a little better, in that some of the sources of contamination are removed. But even bottled milk contains a certain number of bacteria, and, if carelessly exposed to the sun, these few bacteria will rapidly multiply and become myriads.

Then, in opening the bottle, only too frequently the cap is pushed down on one side, to spring it at the opposite side. The result is, the cream underneath is spurted up over the bottle-cap, washing down the dirt from its top surface into the bottle. Besides, very seldom is the rim of the bottle wiped off before the milk is poured out over it; and this rim almost invariably is more or less dirty. And this dirt is washed off into baby's milk-bottle or milk-cup.

Then, when about half the milk is used, the bottle is stood on the kitchen-table or some other convenient place and left there until the next meal—and a very interesting part about the matter is that almost invariably it is left uncovered. The result is a liberal contamination with dust, flies, and gross dirt. Not infrequently when one of the older children wants a little milk, it drinks directly from the bottle.

How the Baby Suffers

In the case of the baby, the milk is poured into a nursing-bottle, which in itself may be fairly clean, but which is provided with a foot or so of rubber hose, instead of with the far more sanitary simple nipple. These long rubber tubes are a veritable bacterial incubator, and in passing from the bottle to the baby the milk is literally filtered through a bacterial nest and becomes practically an emulsion of bacteria rather than an emulsion of fats.

Now, if we are to derive any lasting benefits from our modern system of milk inspection and sanitary regulation, we must educate our clients to a full appreciation of the importance of proper home care of milk.

Milk must not be received in open, unprotected vessels.

It must not be exposed for hours to bacterial contamination by dust, flies, and small animals.

It must not be exposed to the heat of the morning-sun.

It must not be left uncovered on the dining-rooms or kitchen-table, to be contaminated by dust stirred up in the regular household routine, to say nothing of flies.

It must be kept in closely covered vessels, or, better still, in tightly capped bottles. An inverted cup forms an excellent cover for the opened milk-bottle.

It must be kept in the icebox in a part separate from other foods, especially cheese, sour cream and garlic.

Baby-bottles should be provided with sanitary simple nipples that can be thoroughly sterilized, and not with the long hose that is only too frequently seen.

During the summer months, milk of uncertain bacterial purity should be pasteurized if intended for use by the baby. This pasteurization can readily and cheaply be accomplished at home by a very simple apparatus and with very little trouble, as explained in a previous article.

Don't forget that milk is just as susceptible to contamination in your own and your patients' homes as it is in the dairy. It must be protected at every step in its journey from the cow's udder to baby's stomach.

Scrupulous care in the dairy and by the dealer is a waste of energy if the product is to be grossly contaminated and turned into bacterial culture after being received in the home.

These remarks apply with equal force to certified as well as to ordinary market-milk.

What Others are Doing

NEOSALVARSAN IN PULMONARY TUBERCULOSIS

Acute pulmonary tuberculosis has such a tendency to progress rapidly to a fatal issue that any method of treatment which promises the arrest of the progress of the disease is certain of interest. P. Horton-Smith Hartley (*Lancet*, June 6, p. 1602) is treating patients thus affected with intravenous injections of neosalvarsan, usually giving it in 0.9-Gram doses, dissolved in 125 Cc. of freshly distilled water. In a number of cases reported, most striking improvement followed these injections, the temperature not infrequently falling to normal, with improvement in all the symptoms of the disease.

The author concludes that, while neosalvarsan is not specific for acute tuberculosis, it certainly does have the power of influencing many cases of active tuberculous disease of the lungs and, therefore, merits a more extended trial.

CONSEQUENCES OF THE HYPOPHYSIS DISEASE

Reviewing the progress of our knowledge concerning the causative connection subsisting between certain maladies and lesions of the pituitary, or hypophysial, gland, C. Winkler also adds data (*Nederl. Tijd. v. Geneesk.*, through *Muench. Med. Woch.*, 1913, No. 13) from his personal observations.

Thus, we are reminded that enlargement and increased activity of the hypophysis may give rise to acromegaly, gigantism, hypertrichosis, diabetes (insipidus and mellitus), and sudden access of blindness; while hypopituitarism (shrinking and diminished secretion) is followed by dystrophia genitoadiposa and somnolency. Lesion of the stylus of the gland results in instant death.

Hyperpituitarism is a strumous state of the gland, while the opposite condition is brought about (generally) by pressure from an adjacent tumor. In the light of more recent knowledge, correct diagnoses have become possible, and operative intervention has brought about some striking cures. The best route to the gland is through the nares. It is well to bear in mind these relationships when confronted by puzzling cases of this category.

CALCIUM DEFICIENCY THE CAUSE OF THE RAPID DECLINE OF TUBERCULOUS PREGNANT WOMEN

J. D. Drennan is of opinion (*Amer. Jour. Obstet.*, 1913, No. 5) that the rapid progression of the tuberculous process in gravid and nursing women has its cause in a calcium deficiency. The child, during the period of gestation and lactation, abstracts more calcium than such a woman's system can bear under the circumstances—calcium that is needful for the calcification of the infectious foci.

TEST FOR THE LIPOLYTIC FERMENT IN MILK

Milk naturally contains lipolytic enzyme—that is, a ferment capable of splitting lipoid, or fatty, bodies—but human milk contains considerably more of it than cow's milk. This fact is utilized by H. Davidson, of Berlin (*Zeit. f. Kinderh.*; cf. *Muench. Med. Wock.*, 1913, p. 1678), to distinguish between the two. The simple test consists in merely adding a few drops of tributyrin, when soon a pungent odor of butyric acid is evolved in the case of human milk, while even after twenty-four hours cow's milk scarcely gives off any odor of that volatile acrid fat-acid.

FUNCTION OF CECUM AND APPENDIX

Arthur Keith is unable to agree with those who consider the colon and the appendix as without function, and rather an element of danger to man. In support of his contention, Dr. Keith points out (*Brit. Med. Jour.*, Nov. 30, 1912) that the cecum, of men as well as of animals, displays all the anatomical characteristics of an organ capable of functionating, adapted to its object, and fit to adjust itself to the varying diet of the individual. The ileocecal valve is provided with a sphincter that is under nervous control

and separates the enzymic digestive process in the ileum from the bacterial one in the cecum.

The same is true of the appendix; comparative anatomy demonstrating that it is a specialized portion of the cecum, instead of a rudimentary character, although its object is not as yet understood. The greatly increased frequency of diseased conditions of the appendix can satisfactorily be explained by the sudden dietary changes of modern life, to which the organ, in this rapid period of rapid transition, has been able to adjust itself. In this connection, the author mentions the fact that captive chimpanzees living on human diet contract appendicitis.

HYPOPHYSIAL EXTRACTS IN OBSTETRICS

A number of hypophysial extracts are now on the market, under the following names: extract of hypophysis, glanduitrine, hypophysine, pituglandol, neuro-hypophysine, pituitrin, and vaporol. The indications and contraindications to the use of this body under its various names are described by Metzger in the *Paris Medical* (Nov. 1, 1913, p. 509).

While pituitary extract has been recommended for producing abortion, for bringing on labor, and to hasten the expulsion of the ovum in abortion already under way, Metzger restricts the practical utility of the remedy to its stimulant action upon the process of delivery. His conclusions are based upon the observation of 62 cases seen at the Clinique Tarnier, in which the drug was utilized.

It hastens the termination of labor in two ways: first, by exciting uterine contraction, and, second, by hastening dilatation of the os. The uterine contractions appear within from two to ten minutes and become more and more constant until they finally become subintrant. The dilatation of the os progresses rapidly, being slower at the beginning of labor, more rapid as it approaches termination.

In the majority of cases, the drug was injected when dilatation was complete, and it was the effect upon the progress of the presenting part that was most remarkable. When the head is beginning to engage at the superior strait, when the pelvis is slightly narrow and especially if it is flat, one may say that, if the head can pass, it will pass nearly always under the stimulation of the energetic contractions produced by this agent. With the beginning of expulsive efforts, the effect of the remedy often is very remarkable. In 23 injections made when dilatation was complete, delivery was completed, in 14 cases, within half an hour; in less than an hour in 6 others.

Of especial interest, according to Metzger, is the influence of the pituitary extract upon the hemorrhage following delivery. He agrees with Jager, who thinks that we may fear uterine inertia and hemorrhage, providing the drug is injected more than an hour prior to delivery. In its effect upon subsequent hemorrhage, the drug is inferior to preparations of ergot. All authors agree that in preventing postpartum loss of blood ergot is to be preferred to hypophysial extract.

The contraindications to the use of hypophysial extract are any notable disproportion between the presenting part and the pelvic measurements. In such danger, the drug may produce uterine rupture. It should also be employed with prudence in the case of women suffering from pulmonary, cardiac or renal affections. The physician should always keep careful watch of the fetal heart sounds, in the course of the employment of this medicament.

THE DISCOVERY OF SPECTACLES

There is an interesting historical sketch upon the history of spectacles in *The British Medical Journal* of October 25, 1913 (p. 1049), by Dr. George H. Oliver. After an exhaustive study of the question, Dr. Oliver arrives at the conclusion that the invention of glasses should be ascribed either to Salvino or to Spina. The former was a Florentine, and it is claimed he invented spectacles in 1285. He was buried in Florence, and his tomb bore the following inscription: "Here lies Salvina d'Armati of Florence, the inventor of spectacles. God forgive him for his sins. Died in the year of our Lord 1317."

Spina was a Dominican friar, in the cloister of St. Catherine in Pisa. The archives of this monastery relate that he died in 1318, that he was a good man, of retiring disposition, and that he understood how to reproduce anything he saw or heard about.

According to one story, an English monk, Roger Bacon, to whom also the discovery of spectacles has been attributed, on his way to Rome to see the pope on a matter of business for his order, was compelled to stop for a

while in Florence and thus became acquainted with Spina, so that some claim that Spina got his inspiration directly from Bacon.

Bacon, unfortunately, had a bad reputation in clerical circles. It will be remembered that he was the inventor of gunpowder, and, although in scientific knowledge he far excelled his contemporaries, he was looked upon in Italy and elsewhere as dabbling in witchcraft and his work was considered the work of the very devil himself.

It is interesting to learn that the first educated medical man to mention glasses was Bernard Gordon, who was trained at Salerno and was a professor in Montpellier. Fully in accord with the principles of his profession in all times, Gordon declared that spectacles were unnecessary, thanks to his own remedies for eye complaints. From this time on, even into the beginning of the nineteenth century, physicians generally exhibited great hostility toward the wearing of glasses, and they were made, prescribed and fitted largely by empirics.

It was many years after the discovery of spectacles before the laws of optics relating to lenses were discovered, and we owe most of the important facts concerning the discovery of these laws to the immortal Kepler, the great astronomer and mathematician of the seventeenth century.

THE ABBOTT TREATMENT OF CURVATURE OF THE SPINE

An American method of treating scoliosis, which is more generally known abroad than it is at home, and which is being extensively used and praised, in particular by the French surgeons, is the method devised by Dr. E. G. Abbott, of Portland, Maine. This method is described briefly by Dr. J. Torrance Rugh in *The Pennsylvania Medical Journal* for March. He proceeds as follows:

The patients are placed in a horizontal position upon a hammock having one side much shorter than the other and stretched in a frame. The convexity of the patient's back is placed on the short side of the hammock. so that the concavity, being without support, may sag downward as far as possible. By means of bandages, the high shoulder (convex side) is drawn downward and backward, the low shoulder is pulled forward and upward, the legs are drawn upward in marked flexion, the pelvis is fixed in a horizontal position or twisted so as to assist in overcoming the spinal deformity, and the chest is drawn backward and rotated to the concave side as much as the patient can bear. Protective pads are properly placed and other padding is placed on the concave side (to be removed as soon as the jack is applied), to make room for the body as it is pushed over in correction. After the plaster jacket is applied, it is trimmed to the desired corrective shape, and openings are made to allow the introduction of pads of felt laterally over the convexity of the ribs and anteriorly over the chest deformity.

The patient is given exercises (such as hanging by the low arm, deep breathing, etc.) daily, to stretch the spine and increase its flexibility. Felt pads are introduced under the jacket as soon as the body shows signs of yielding, and this is repeated as often as the patient can bear it or as the body yields. This work is continued until the body is pushed to the opposite side, when, if correction is not complete, another jacket is applied and the treatment continued until the desired results are obtained.

The length of time that the jacket will have to be worn will depend upon the industry, perseverance, and age of the patient, the severity of the deformity and the length of time it has been present. As a rule, however, it can be entirely removed within eight or ten months or less; but the exercises must be continued for at least two years, and possibly for four or five.

EXPERIENCE WITH THE MODE OF EXHIBITING EMETINE

Ordinarily, Martin Mayer (*Wien. Med. Woch.*, 1914, No. 5) affirms, one will not exceed 0.05 Gram as the dose of emetine hydrochloride in treating amebic dysentery. Altogether, the proper dosage still is somewhat in the experimental stage; however, these patients seemingly can bear relatively large amounts without inconvenience.

The author cites Baermann and Heinemann (l. c. 1913, Nos. 21 and 22), who have administered intravenously as much as 0.25 Gram (grs. 4). He himself has given it, in two very severe cases of amebic dysentery, hypodermically, twice a day, in doses of 0.05 Gram, without eliciting the slightest unpleasant effect, while the clinical cure was "amazingly" rapid.

Mayer reports one marked concomitant action of emetine, though, which he observed in a number of patients treated for dysentery —amebic, and one of the lamblia type (described elsewhere)—and that is, obstinate

constipation. For this reason, Mayer has decided in future to associate from the very first cathartics with the emetine.

His idea is, to give a physic every day (best, probably, a saline) during the emetine-course; and he strongly urges others to try this out. Possibly, he surmises, such a course may simultaneously prevent the too rapid closure of the intestinal ulcers, and with that the occlusion, in the deeper tissues, of any amebas that may have escaped the direct action of the emetine.

PREVENTION OF SELF-INFECTION AT GYNECOLOGIC OPERATIONS

Extensive bacteriologic investigations lead W. Benthin, of Koenigsberg, to advise (*Monats.* f. *Geb.* u. *Gyn.*, Bd. 39, H. 5) that always the vaginal secretions be examined for virulent germs before undertaking upon a woman any operation involving the vagina; this, in order to forestall, by appropriate measures, any possible autoinfection of the subject.

To this end, the author suggests: whenever hemolytic streptococci are discovered in the vaginal tract, institute a course of irrigation with a 1 : 1000 solution of mercury bichloride or of one of 5 : 1000 of lactic acid. In this way, the noxous germs often can be eradicated and thus the prognosis improved; although this hardly is true in the case of carcinoma, where those cocci generally are present in the vaginal secretions.

DIPHTHERIA IMMUNE SERUM "TA"

The new serum developed by E. von Behring and Richard Hagemann, for prophylaxsi against diphtheria, consists of an adjusted mixture of toxin (T) and antitoxin (A), and has been given the distinguishing symbol "TA". The two distinguished investigators discuss this promising new weapon against that ravishing disease in a contribution to the *Berliner Klinische Wochenscrift* (1914, No. 20), saying that it effects active immunity, but must be injected at least twice within ten or fourteen days. However, before it can be introduced commercially, the serum needs to be tested out still more thoroughly.

Professor Park, of New York, in a paper read at the Atlantic City meeting of the American Medical Association, in June, gave an interesting analysis of Behring's toxin-antitoxin serum, and showed it of little special value in treating diphtheria or in immunizing those already exposed, since the immunity is not developed for some two or three weeks. It may prove of merit in producing active immunity of longer duration than can be secured with diphtheria antitoxin, but its value in that special field has not yet been developed.

TRANSPLANTATION OF HUMAN HAIRS

Not enough that enterprising cosmetic surgeons now will suture hairs into the scalp and thus reconstitute a permanent luxuriant "growth" of hair (after the manner of tooth-brushes!) upon the glossy heads of wealthy customers, but it is now announced (*Deut. Med. Woch.*, 1914, No. 19) that with the aid of certain patented instruments living eye-lashes are being transplanted into bare eyelids, the "grafts" being punched out, with root and bulb, from the brows or other parts.

INFLUENCE OF CALCIUM UPON SEROUS TRANSMIGRATION

Animal-experiments conducted by R. Levy tend to show (*Deut. Med. Woch.*, 1914, No. 19) that calcium salts do not exert a very marked influence upon the progress of pleuritic exudation, at least when this process has been artificially inaugurated (by means of oil of turpentine) in rabbits. When calcium chloride was administered subcutaneously, it would at first somewhat arrest infiltration, but after that rather increased it. The same is true with similarly produced exudation into the abdominal cavity.

URIC ACID IN THE BLOOD, AND ATOPHAN

By means of Folin's improved colorimetric method, E. Steinitz has made determinations of the percentages of uric acid in the blood; and he found (*Deut. Med. Woch.*, cf. *Muench. Med. Woch.*, May 19) these results: The amount of endogenic uric acid in normal blood and under a purin-free diet is approximately 0.003 per mille; however, in genuine gout the uric acid averages 0.045 per mille, and 0.045 per mille in atypical gout.

Then Steinitz further was able to ascertain that atophan (i. e., phenylquinoline-carbonic acid) regularly would markedly diminish the uric-acid content of the blood; an effect, though, which quickly disappeared after the interruption of the drug. His deduction is that in conditions of this kind frequent

repetitions of courses with atophan will prove beneficial, while small doses will serve to correct any errors in diet.

URINARY ACIDITY IN NEPHRITIS

In a previous number of CLINICAL MEDICINE, we referred to the studies of Martin H. Fischer, of Cincinnati, who apparently has shown that the symptoms of nephritis in its various forms are due primarily to acid intoxication. The excess of acid causes swelling of the kidney cells, with a reduction of their exosmotic power and, finally, their degeneration. An interesting contribution upon the same lines is made by Walter W. Palmer, in the September 25 number of *The Boston Medical and Surgical Journal.* He has studied with exceeding care the problems of urinary acidity in its relation to nephritis. More than 3000 samples of urine, collected from between 600 and 700 individuals, have been examined carefully, and he has arrived at some very interesting conclusions.

In the case of normal persons, Doctor Palmer has learned, the acidity of the urine is about twenty-five times that of the blood. In many pathologic states, the urinary acidity is greatly increased over this, and this is especially true in nephritis. In acute and chronic nephritis, the urinary acidity in the persons examined averaged between 125 and 250 times that of the blood; in other words, the urine was five to ten times as acid, proportionately, as in normal persons.

Doctor Palmer further declares that he has never found the urine, either in pathological states or in any normal condition, more alkaline than the blood, save after the administration of an alkali or because of some other experimental interference. The quantity of acid in the urine is increased, not only in nephritis, but also in pleurisy with effusion, primary and secondary anemias, and pneumonia, as well as in conditions where betaoxybutyric acid is formed.

Doctor Palmer's observations lead to the belief that the use of an alkali is indicated in many conditions where it has not usually been administered. When the alkali is given, however, for whatever cause, the effect upon the urine should be carefully watched. The reaction of this secretion should never be pushed below that of the blood, since as a consequence not infrequently a well-marked albuminuria may result.

As already stated, in nephritis the urinary acidity is enormously increased. Especially is this true for chronic glomerular nephritis; less so in acute nephritis and in patients presenting the arteriosclerotic type of kidney. In such conditions, it is clearly deducible from Doctor Palmer's paper, the therapeutic administration of alkali in such quantity as to reduce the urinary acidity to or near that of the blood is often most desirable.

EMETINE AND VACCINE TREATMENT OF SPRUE

In a recent number of CLINICAL MEDICINE, we reported a case of sprue treated successfully with emetine hydrochloride. A very interesting paper is contributed to *The Lancet* of June 6 (p. 1605) by Leonard Rogers, who, it will be remembered by our readers, introduced the emetine treatment for dysentery.

Sprue, as the writer says, is a very unsatisfactory disease to treat in tropical climates; in the great majority of cases no improvement results from our present methods. He has recently been trying injections of emetine hydrochloride as used in amebic dysentery, together with a vaccine prepared from streptococci derived from the patient's mouth ulcers, in which they are found as an almost pure culture. He reports in detail two well-marked cases in which this treatment was employed with very marked benefit.

Rogers does not look upon emetine as a specific for sprue, as it is for dysentery; nevertheless, he considers it a very valuable remedy here, especially when employed in association with the vaccine treatment.

NUCLEIN IN PARALYSIS AGITANS

Parkinson's disease (paralysis agitans) is so resistant to treatment that any method of handling cases of this kind that promises benefit deserves study. Buia has recently quoted a series of cases of this disease in which nuclein was used. (See *Compt. Rend. d. l. Soc. d. Biol.*, 1914, p. 507.)

Buia employs a 10-percent solution of sodium nucleinate in physiologic serum. He gave it by mouth, hypodermically, and also intravenously. When taken internally, no effects were observed. Administered subcutaneously, the maximum dose was 40 centigrams (6 grains); beginning, however, with a much smaller dose and then increasing by 5 centigrams every two days, until this maximum was reached. Five patients were treated in this way, and all of them were benefited.

However, the best results were obtained when the remedy was given by the intrave-

nous route, the same solution being employed. Sometimes the immediate response was slight; in others, there was a well-marked rise of temperature, with slight chill, while in a third there was observed some diminution of tremor, a lessening of the muscular rigidity and in the rise of temperature, the latter subsiding to normal in about four hours, with some rise in the blood pressure.

In the second class of patients, there was general improvement following the immediate symptoms produced by the injection of the nuclein. Continuance of this treatment was marked by definite psychic improvement, accompanied by lessening of tremor and increase in muscular force. This benefit exhibited some degree of permanency. No untoward symptoms developed, although in some instances nausea, vomiting, and vertigo developed when more than 35 or 40 centigrams of the remedy was administered. There was occasional tachycardia, dyspnea, and headache. However, these depressing symptoms are not observed when the drug is given in moderate doses.

We should like to see the Lundvall solution, containing nuclein, arsenic and quassine, tried thoroughly in some of these cases.

FOOD TOXEMIA, OR, "AMERICAN GOUT"

That the condition of the intestinal canal plays a stellar role in the great majority of diseases, the readers of this journal are well advised. We know that most of us—certainly most of our patients—take more food than is required by the needs of the individual economy; also that our bodies suffer in varying degree from the excess of food taken into our stomachs. Dr. Robert N. Willson, who writes upon this topic in *The New York Medical Journal* (Mar. 7), adds to this duo of fundamentals a third—to wit, that few adults cleanse their gastrointestinal tracts from one end to the other at intervals frequent enough to insure freedom from food poisoning.

Doctor Willson has studied this subject, not alone upon his patients, but also upon himself and his little 5-year-old daughter, and he has found that by running up and down the scale of food quantity and variety he is able to produce—and by the same method to relieve—many clinical pictures which ordinarily are labeled with various disease-names. For instance, by deliberate experiment in his own person, he has been able to produce coryza, bronchitis, influenza, pulmonary congestion, myositis, intercostal neuralgia, lumbago, heartburn, palpitation, gouty swelling of the joints, and even apparent arthritis deformans; to say nothing of a series of symptoms indicating general toxemia, including heaviness and sleepiness, loss of initiative, general muscular and skin tenderness or swelling, besides loss of weight, almost to the point of incapacity for work.

Doctor Willson is not a vegetarian, for he declares that meat has seemed to exert very little influence for evil, provided it is consumed sparingly and but once a day. However, as soon as the individual limit is exceeded, invariably malefic consequences result. Somewhat similar symptoms frequently are produced by acid fruits, such as an orange, a lemon or an apple.

Cases such as he describes in his own person, Willson asserts, by no means are rare, and he reports the experience of several physicians who have seen cases of lumbago, various arthritides, colds, catarrhs, rheumatism, and the like, which plainly were attributable, in their respective opinions, to intestinal toxemia. He reports eleven cases, occurring in patients of various ages, in which disturbances within the intestinal canal, the result of too much or too little food, were plainly the cause of disease.

Returning to his own experience and discussing methods of securing relief, Doctor Willson writes:

"I have found that in my own case two meals a day, and only one of these a full meal, is my limit of toleration, if health and vigor, activity and interest, and, curiously, bodyweight are to be maintained. As long as I adhere strictly to this regimen of nothing to eat between meals or after midday, no fruit, no highly acid vegetable, have two quarts of drinking-water daily, and exercise in the fresh air to the point of healthy tire, I remain able to rise at 6:30 o'clock and retire at 1.00 (a. m.), and enjoy every moment of work and play."

Doctor Willson also notes that when he is under special nervous tension there is an increasing tendency for the appearance of these symptoms, the partial cause of which is the inability of the alimentary canal to absorb and assimilate the food which is put into it.

Altogether, he is of the opinion that the old country doctor with his bottle of castor-oil and his knowledge of the efficiency of occasional starvation and now and then a generous sweat, struck nearer the causation and treatment of man's physical ills than does many a laboratory-worker who twists first

this and then that bacterium out of relationship with its own and its ancestors' environment. He believes that the more generous use of some vigorous laxative, repeated more than once, and aided perhaps by an epsom-salt or sodium-bicarbonate enema—also repeated together with starvation until relief, besides rest in bed if the symptoms demand that measure, is an unfailing method of treatment in those forms of disease which, for lack of a better word, he calls food toxemia, or "American gout."

LOW BLOOD PRESSURE

We hear so much about high blood pressur that it is a pleasure to find some reference in the literature to the significance and treatment of low blood pressure. This latter condition is discussed by Dr. Edward E. Cornwall in *The New York Medical Journal* for March 7 (p. 470), and he declares that variations in blood pressure are so great, both in health and in disease, that it is impossible to draw rigid lines and say with positiveness that certain systolic pressure is high and another one low. However, as a rule, for a young adult a systolic pressure of 100 mm. is low; for a person of middle age, one of 110; for an elderly person, one of 120; for a person with sclerosis of the arteries supplying a vital region, one of 140; and for advanced interstitial nephritis, one of 180 must be so accounted.

More important, however, than the degree of systolic pressure is the difference between systolic and diastolic pressure. It is essential to consider the records of the two (systolic and diastolic) together in their proper relation. Any special disturbance of the normal relation between the two has a pathologic significance, and should be understood.

Among the causes of low blood pressure, myocardial degeneration should be considered, of course. However, Cornwall believes that low blood pressure more frequently is the result of toxemia and nervous and reflex conditions than it is of degeneration of the heart. Especially interesting is his statement that intestinal toxemia may cause either a low blood pressure or high blood pressure. In either class, some relief will be secured by the adoption of a nonputrefactive diet, that is, if the blood pressure is low, correction of the diet will be followed by an increase in blood pressure; or, if it is high, appropriate change of the diet will be followed by a lower blood pressure.

Of course, low blood pressure occurs during the course of most acute infectious diseases; falling, for instance, in pneumonia. Thus, in 27 out of 30 cases of pneumonia, all of which terminated favorably, the systolic pressure fell below the pulse rate, thereby contradicting the assertion of Gibson and Hare, that when this occurs during pneumonia the prognosis is bad.

In the interpretation of blood-pressure findings, Cornwall says considerable allowance must be made for the neurotic factor in the patient as well as the personal factor in the observer, and the clinician must constantly guard against being misled by these findings.

In treating these patients, the first thing to do is, to remove the cause, if possible; this injunction being of especial value in intestinal toxemias. The essential element in the treatment, however, is rest, and if the low pressure is persistent prolonged rest in bed is imperative.

When there is cardiac insufficiency, treatment, of course, must be adjusted to the indications. Cornwall has found strychnine, strophanthin, and caffeine most generally useful. Digitalis may be prescribed when the myocardium is healthy, but it is contraindicated when there is degeneration of the heart-muscle. When there is severe falling of the diastolic pressure, owing to toxemic vasomotor dilatation, the author considers adrenalin and pituitrin quite likely to prove of value. In some cases with relatively high diastolic pressure and small pulse pressure, nitroglycerin may prove useful, but this drug is contraindicated when the diastolic pressure is low.

In those instances in which the lowered pressure is the result of hemorrhage, the circulating fluid should be augmented by the infusion of normal saline solution, while the foot-end of the bed must be raised.

SIGNIFICANCE OF INDICANURIA

In an interesting paper upon cyclic indicanuria (*N. Y. Med. Jour.*, Apr. 4, 1914, p. 669), Gustav Barr says that we can divide cases of indicanuria into three types; namely: (1) transitory, caused by some passing anatomic lesion or some temporary, possibly psychic, insufficiency of the gastrointestinal secretions; (2) constant, the result of permanent or progressive anatomic lesions of the gastrointestinal tract or of permanent insufficiency of the gastrointestinal secretions; in the latter, we can remove the indicanuria and many of the clinical symptoms by means of high colonic lavage; (3) recurrent, due to

some recurrent anatomical lesion of the gastrointestinal tract. High colonic lavage will remove this latter type of indicanuria only when the lesion is in the colon; if, however, the lesion is higher up, high colonic lavage will have no influence whatever.

Doctor Barr brings out strongly the hypothesis that in every lesion of the gastrointestinal mucosa, no matter what its cause, indicanuria is likely to occur. It may follow simple lesions or the more profound ones, such as those which occur in tuberculous peritonitis, carcinoma of some portion of the intestinal canal, stricture of the rectum, ileus, and other serious diseases. In a word, all anatomic lesions of the gastrointestinal tract are characterized by indicanuria.

THE TREATMENT OF TETANUS WITH PHENOL

Some months ago one of the readers of CLINICAL MEDICINE asked us to describe Bacelli's method of treating tetanus with carbolic acid. We find a very interesting and complete article upon this subject in the *Gazette des Hôpitaux*, December 16, 1913 (p. 2273), written by de Gery.

Bacelli made public this method of treatment in 1888, at the Congress of Italian Medicine, and since that time it has been employed by many physicians in many different countries.

The mode of using the remedy is simple, the phenol being dissolved either in water, in dilute alcohol, glycerin and water, physiological serum, or in olive-oil, plain or camphorated, and administered hypodermically. Bacelli prefers simply an aqueous solution of 2- or 3-percent strength, although much stronger solutions are employed at times, and some clinicians prefer 1-percent solutions. Gerest prefers the following oily solution: Sterilized olive-oil, 1 Cc.; camphor, Gm. 0.01; phenol, Gm. 0.10.

The quantity injected daily, as well as for each single dose varies greatly, but in 1911 Bacelli himself advised progressively increasing doses, according to the susceptibility of the patient. He suggested the use of from 1 Gram to 1½ Grams of phenol as the daily quantity, this to be divided into from six to twelve injections.

Patients suffering from tetanus exhibit a remarkable tolerance for phenol, this tolerance increasing with the severity of the attack. The total quantity of phenol given during the course of an attack of tetanus sometimes is enormous. For instance, Luciani gave an injection of 1.2 Grams a day, and a total of 40.45 Grams during the course of treatment that lasted forty-three days. Lapponi and Fiorioli have been able to introduce as high as 3 Grams a day, without inconvenience to the subject, one of these having continued this dosage for fourteen days. Children bear well comparatively large doses of phenol.

The subcutaneous route is the one most frequently employed, although several clinicians have injected the phenol intravenously, with good results. Two at least have reported making intraspinal injections, their patients having suffered on inconvenience therefrom. The pain caused by the subcutaneous injection varies, but as a rule is claimed to be slight and of short duration.

During the phenol treatment, the urine usually becomes of a blackish color as the result of phenol intoxication; but this symptom disappears quickly, without leaving after-disturbances, when the dosage is reduced or tolerance for the drug is established. De Gery says that the administration of 10 to 15 Grams of sodium sulphate daily may be employed to prevent phenol intoxication.

The effect of the treatment upon the tetanic paroxysms apparently is a most happy one. The drug seems to have a tranquilizing effect, and the patients themselves are generally favorable to this method on account of this action. According to Roerich, the tetanic phenomena are always pronounced shortly after this treatment is interrupted.

A study of the mortality statistics of the phenol treatment, as compared with the serum treatment, is most interesting. De Gery quotes the reports of different observers, who report a mortality from tetanus of from 50 to 80 percent. The mortality following the treatment with serum apparently runs from 40 to 45, up to 56.5 percent.

Now compare with those figures the results obtained with phenol. According to different observers, the deaths run from 12 to 13 percent, up to 21.47 percent. The latter figures were taken from Roerich's report of 296 cases, with 84 deaths. This is the most unfavorable series reported, but, as compared with 40 percent of deaths in the best series reported treated with the serum, the results seem very good, indeed.

Tetanus antitoxin is a remedy of great value; still, its greatest field is that of prophylaxis. It undoubtedly is the most efficient remedy we have for the prevention of lock-

jaw, and it should always be employed locally as well as subcutaneously whenever a patient receives a suspicious wound.

Probably the best method of treatment for fully established tetanus is the combination of Bacilli's phenol treatment with the local and subcutaneous use of tetanus antitoxin. The fine paper of Ashhurst and John, an abstract of which appeared in these columns some months ago, seems to support this view.

BETAIMIDAZOLYLETHYLAMIN AS A CAUSE OF URTICARIA AND ASTHMA

While experimenting with betaimidazolylethylamin in the clinic of von Noorden at Vienna, Allan Eustis discovered that the application of this substance to the skin caused a localized edema resembling urticaria. Eppinger, who has reported some experiments with this chemical, has come to the conclusion that it is responsible for the skin eruption just mentioned, that is, when this eruption is of gastrointestinal origin. Betaimidazolylethylamin is formed in the intestinal canal whenever histidin undergoes putrefaction; and histidin is one of the amino acids formed by the normal pancreatic digestion of proteins, the percentage yield of this decomposition product varying with the different proteids. Hemoglobin (from the meat) is particularly rich in this substance.

Accepting this hypothesis as explaining the etiology of urticaria, Doctor Eustis goes on to say (*N. O. Med. a. Surg. Jour.*, Apr., 1914) that a rational therapy can be outlined, based upon dietetic principles. This, for instance, is demonstrated by the experience of Salomon, who has been able to cure rebellious urticaria by having his patient abstain from all albuminous food during, say, two weeks, the diet consisting of tea, coffee, bouillon, lemon- and grape-juice, potatoes, rice, cereals, bread, and plenty of butter and sugar. The aim is, of course, to prevent putrefaction of the histidin in the intestinal canal. Salomon found that at the end of two weeks the albuminous foods could gradually be restored to the diet, while the patient still remained free from urticaria.

Of course, it is essential that the alimentary canal should be cleaned out quickly and thoroughly, and for this purpose Eustis recommends a combination of calomel, phenolphthalein, and rhubarb, to be followed by a saline laxative. After this, daily evacuations are secured by the use of liquid petrolatum, agar-agar, fig paste chopped up with senna leaves, or other similar simple laxative remedies. However, by adding coarse vegetables containing much cellulose and ordering a glass of water to be taken upon rising in the morning, he has found that intestinal toxemia usually is quickly overcome. The presence or absence of this latter condition can be determined by frequent examination of the urine for indican. Eustis also declares that cultures of bacillus bulgaricus give excellent results in cases of this character, an excellent suggestion which we commend to readers of CLINICAL MEDICINE.

EMETINE IN HEPATIC ABSCESS

Sir Dyce Duckworth, in a fine paper published in the July number of *The Practitioner*, bears testimony to the value of emetine. Speaking of tropical hepatic abscess, he says:

"Prevention being better than cure, we may now readily avert the occurrence of amebic abscess by employing the alkaloid of an effectual though very old remedy, derived from the *radix antidysenterica*, ipecacuanha, long known (for nearly four centuries) as a specific for dysentery. This remedy is emetine, the active principle of the ipecac root, and it is very deadly to amebae. Professor Rogers, I. M. S., has the credit of discovering its extreme and rapid beneficial action in amebic dysentery. It is, in fact, a specific remedy. The best salt is the hydrochloride, and this is to be given in 1-grain doses, dissolved in 2 Cc. of sterilized water twice a day. This dose is equal to one dram of the powdered ipecacuanha root, and is given hypodermically. This dosage is found to destroy all the amebae in the body in two or three days. If no benefit is found in three days, we may be sure that we are not dealing with amebic dysentery at all, for it is of no use in bacillary dysentery."

EMETINE IN DYSENTERY

Nine cases of dysentery in which the patients were treated with emetine are reported by Friedenwald and Rosenthal (*N. Y. Med. Jour.*, July 4, p. 3), seven of these being males and two females, and their ages ranging between ten years to forty-two. The drug was employed hypodermically, in doses of 1-3 to 1-2 grain two or three times daily, the injections being continued for about one week.

In every instance the drug was well tolerated. In a few cases pruritus appeared,

which extended over the entire body; but these symptoms always disappeared within a week. Usually after the third or fourth injection the number of the stools began to lessen, the blood and mucus disappearing and the stools becoming more and more solid and natural.

In not one of these nine cases could the amebæ be detected in the stool after the first day's treatment. However, argyrol injections were employed in several cases. After the first two or three injections, the rectal ulcers showed signs of healing, and they disappeared entirely after a week or ten days.

The writer continues: "Although we have in emetine a specific for the cure of amebic dysentery, it must be borne in mind that patients can not be pronounced cured until a considerable period of time has elapsed without reappearance of the symptoms, for encysted amebæ may be set free and produce a recurrence of the symptoms. It is, therefore, important that patients treated for amebic dysentery with emetine should be kept under observation for some time and at the first sign of recurrence should again be given treatment."

THE IDENTIFICATION OF THE DEAD

Until Mark Twain wrote his interesting story, "Pudd'nhead Wilson," there were few people in this country who knew very much about the Bertillon method of identifying people by their finger-prints. Today nearly everyone knows that there is such a method; although, however, it is generally believed to be principally of value in the identification of criminals. It may not be known to all our readers that every soldier who enlists in the United States Army has his finger- and thumb-prints taken, and that these not only are of value for the identification of deserters, but also, at times, to identify the dead.

A striking illustration of the value of this test appeared in the July number of *The Military Surgeon*, Major A. W. Williams, of the Medical Corps of the U. S. Army, reporting two interesting cases.

The first case was that of an unknown man who evidently had committed suicide by means of carbolic acid. No identification-check, papers, or any marks on the body or clothing could be found. However, the dead man's garments showed that doubtless he was a soldier. A finger-print was made and this, when sent to the Adjutant-General's office, proved that he was an enlisted man in the 18th Infantry. He had absented himself from his organization without leave.

The second case was still more striking. regarding it, Major Williams writes as follows:

"Remains of an unidentified soldier found in the woods near Hitchcock, Texas. An examination of the body showed that it was almost completely destroyed by maggots—no identification-tag or marks of identification to be found. The skin and appendages were practically all gone, excepting the hair, nails, and a small amount of discolored and shriveled skin on feet and hands. The adjutant-general of the Second Division, Colonel Alvord, stated that he was very anxious for me to establish identity of the soldier, if possible."

The condition of the skin, we are told, was such that it seemed almost impossible to secure a print of the skin of the finger-tips. Indeed, the epidermis had been completely shed during the prolonged exposure of the body to the elements; yet, with a magnifying glass the lines were still visible on the true skin. This, however, was in such an advanced stage of decomposition that it was not considered advisable to inject it in order to round out the sunken finger-tips and thus secure on paper a rolled impression with printer's ink. Finally, at the suggestion of Dental Surgeon Rice, a print was successfully made on a thin sheet of gutta-percha, this being warmed with the aid of a spirit-lamp and then pressed deeply into the skin, so as to make a record of the depressions therein.

The gutta-percha molds thus obtained were sent to the Adjutant-General's office in Washington, and there the fact was established that the remains were those of a private in Company I, of the 27th Infantry, who had, supposedly, deserted about December 16, 1913. He had been missing from his company for about that time; but, instead of being a deserter, the man undoubtedly had wandered into the woods and there perished. And thus this soldier's honor was vindicated.

It is likely that eventually this method of establishing identity will be much more generally employed than it is at the present time. There is no good reason why the finger-print of every citizen should not be recorded early in life. It is a fact that these lines never change, that even the finger-prints of a baby are sufficient to establish the identity of the same person, no matter how advanced in years. Should we ever have another great war, undoubtedly this method will be resorted

to to establish the identity of those "unknown dead" who heretofore have filled our great national cemeteries.

The extension of the finger-print method of identification to all citizens has advantages which need no demonstration at my hands. We may come to this sometime. It would solve many a mysterious disappearance, which now is a nine day's wonder.

STUDIES IN COFFEE MAKING

Probably the most careful studies of coffee making ever undertaken were those conducted upon the instigation of the National Coffee Roasters' Association, which appointed a committee (of which Mr. Edward Aborn, of New York, was chairman) to go into the subject thoroughly. This committee consulted not alone with the roasters and grocers, but also with domestic-science institutions, government bureaus, and many competent housewives, and checked up the results obtained with careful chemical analyses of the coffee-infusion made according to different methods.

This committee demonstrated first of all that the virtue of the coffee-infusion is directly proportional to the fineness with which the roasted berries are ground; in other words, the full strength of the brew is assured by grinding rather than by cooking. Furthermore, coffee which is finely pulverized gives a larger yield of full-strength coffee-infusion, pound for pound, than beans that are not so minutely ground. It is vitally necessary, however, that, when pulverized coffee is used, it be freshly ground just before using, since it deteriorates quickly. This necessitates the use of a coffee-mill in the home. There are a number of makes of such mills on the market that can be procured at a small cost and which do the work satisfactorily.

Another important fact brought out by the investigations of this committee was that water at the boiling temperature of 212° F. is twice as efficient in extracting color, and more so in extracting the flavor from the ground coffee-beans, than water at 150° F. Caffeine and caffetannic acid will dissolve in cold water, but the flavoring oils require a high temperature for their extraction.

Coffee was made according to four methods: (1) boiling, (2) steeping, (3) percolation, and (4) filtration.

The boiling method had the least to commend it. Thus produced, the infusion is high in caffeine and tannic acid, muddy in consistency and overrich in dissolved fibrous and bitter matters. Most of the deleterious physiological effects attributed to coffee—and this a point of highest importance to remember—are attributable to the dissolved tannins, owing to excessive boiling or to the use of coffee grounds a second time.

Steeping—that is, brewing the coffee by the addition of cold water, which is allowed to come to a boil—produces a liquor containing the least caffeine, and is, therefore, recommended when it is desirable to secure a beverage which contains a low percentage of that alkaloid. A medium degree of granulation is the most suitable for its preparation.

The objection to the percolation-method is that the water used for extracting the coffee is of a temperature not over 150° F., and generally lower than this. While percolation extracts the caffeine and the tannic acid, the beverage thus obtained has a pronounced tannic-acid taste, but it lacks the desired aromatic flavor and characteristic color. More coffee is required than by the filtration method.

Filtration consists in pouring boiling-hot water through pulverized coffee placed in a close-meshed muslin bag, the water being allowed to pass through the coffee slowly, and but once. According to W. W. Kennedy (*Am. Food Jour.*, Apr., 1914, p. 155), this method, judged by cup-tests, wth skilled and unskilled tastes, produced the purest quality of coffee-infusion, while requiring the smallest amount of coffee. It develops the aromatic flavor and brings out the distinctive characteristics of different varieties of coffee. Coffee obtained by filtration contains a low percentage of tannic acid and a medium percentage of caffeine.

The writer concludes that those who complain of any disagreeable effects from coffee would, undoubtedly, get over the trouble by having recourse to the filtration method. If they cannot without harm drink this product, they cannot tolerate any genuine coffee. However, the physiologic effect of coffee drinking can be controlled by choosing the method of brewing. By so doing, the housewife can obtain at will a low or a high caffeine or tannin percentage. On the whole, the filtration method seems to be the one generally favored as producing a coffee of the highest aroma, with least deleterious consequences.

Miscellaneous Articles

"Our Lethargic Profession"

IN THE June number of CLINICAL MEDICINE, in the first editorial, under the heading, "Our Lethargic Profession: How Can We Wake It Up," we tried to arouse the readers of this journal to the importance of understanding some of the economic movements now going on in the medical profession, and of organizing ourselves in some effective way in order to protect our own interests. We asked our readers to give this matter careful consideration and then to write us their own views, that we might evolve, through discussion, some practical plan, or plans, for meeting the situation.

Following this article we print a number of letters upon this topic. These are but a few of the many received, and they were selected because they represent several different viewpoints. Hardly two men agree as to the nature of the problems, as to which are most important, or as to the remedies to be employed for curing our evils or preventing more serious ones from following. These letters do, however, show that the medical profession is greatly interested in the "dollars-and-cents" side of medicine and that it is anxious to have "something done."

One contributor asks us to assume leadership of an economic movement. Another suggests the organization of a society of dispensing physicians. Still another is convinced that the problem of fees is the most important which confronts us. In the writer's opinion, all these matters are important, but they cannot all be dealt with successfully except by organized effort. What we really need, therefore, is to unify the profession in some way in order to make it a real fighting force in all matters which concern the doctor's income and his social and economic relations.

Of course the ideal method of getting what we want is through our state and national organizations, providing they can be persuaded to take up these problems and deal with them earnestly. Thus far our societies have been mainly interested in the professional side of our work and it is hard to convince our leaders that anything else is of importance. It was because of this indifference that there has been so much talk of starting independent societies. Personally the writer does not believe it wise at the present time to organize the dispensing physicians into a separate society, but he is willing to learn, and anxious to secure the opinions of readers of this journal.

In New York there has already been established a Federation of Medical Economic Leagues, the organ of which is *The Medical Economist*, published at 302 Broadway. We believe that this organization and its journal are both doing good work, but its activities for the present are restricted mainly to New York City, although it is establishing a few branches in other cities. If the League would extend the scope of its work so as to embrace the interests of the country physician as well as the city physician, those who dispense as well as those who prescribe, and would deal strongly with *all* economic problems with which the physician is concerned, it might prove just the organization needed. (See editorial, page 665 this issue.) We certainly urge the readers of CLINICAL MEDICINE to secure sample copies of *The Medical Economist.*

While CLINICAL MEDICINE has been doing much to prevent the passage of laws which would interfere with the doctor's right to dispense, it by no means believes that the legislative interests of the physician should begin and end here; nor is it fighting the battles of the dispensing doctor any more than it is those of the prescribing doctor. We believe that it is the right of every physician to use the method of practice which he prefers, and we certainly do not purpose making war upon the druggist, who is generally a good man and a useful ally of the physician. However, for many of our readers, dispensing legislation is a living issue. It is for this reason that it has been forced into the foreground in our pages; and it is likely to be discussed very frequently during the coming year.

We believe that attempts to secure legislation of this kind will serve the purpose of

bringing the profession together for the study of economic questions; but do not get the opinion that it is the only economic problem in which CLINICAL MEDICINE is interested. We shall do everything within our power to make the doctor's lot a happier one, his work more satisfactory to his patients, and more profitable for himself.

With this introduction we place the whole matter in the hands of our readers for discussion.

Why Not "Fend" for Ourselves

Your editorial on "Our Lethargic Profession," I think, is excellent and timely. It certainly is time we did something to get on a business basis and receive proper compensation for our services. And this would react to the benefit of the patient; for, while some physicians may consider it a sacred duty to treat suffering humanity regardless of whether they get paid or not, I am sure it would serve humanity far better if we were to insist upon proper compensation for services rendered. For, with the increased income and more spare time we could improve our knowledge and add materially to our office-equipment; thus assuring the patient better service.

Most of us are practicing medicine to earn a living for ourselves and our dependents, and statements to the contrary, it seems to me, are hypocritical. Working for the benefit of suffering humanity is an excellent thing, but it must, logically, come second; for, if we cannot earn a living, we must starve or else go into some other business, and thus, are beyond "serving humanity." It is a broad subject and has many angles to look at and from. I hold that, when we allow a patient to cheat us out of a bill for professional services and medicines, services rendered at all hours of the day and night, Sundays and holidays, at considerable sacrifice to our comfort, health, and future efficiency, we are, in a legal sense, either compounding a felony or are accessory to the crime.

The dear public takes us at our face value. When he sends a bill for services, any business man, lawyer or mechanic will insist on being paid promptly. A physician sends his bill—sometimes with an apologetic request for payment, more often not—and then waits. The public feels that if the services were worth it he would insist on payment. He does not press them, consequently he has not earned what he asks.

This month two physicians were shot to death, one here in Illinois the other down in Georgia, for refusing to wait upon sick people. Isn't that pretty tough? The public demands much, but gives little.

An ex-doctor who now runs a collection-bureau here in Chicago has what I think is a good system. He takes collections from as many doctors as he can get in a certain district. All their "dead ones" are listed in a card-index system: the amount, to whom indebted, final disposition of the account, settled in full, in part, sued, and so on. Any of his subscribers upon getting a new patient may call up the collector and obtain any available information he may have relative to that person. This gives the physician something to think of, for, if a patient owes one doctor, as a rule he is perfectly willing to owe another also. Then, if the doctor wants to work for nothing, it is his privilege. The Chicago dentists have a clearing house where all the deadbeats are listed similar to this ex-doctor's plan.

Oh, if the doctors would only pull together, cooperate. But, no, each is a law unto himself. His life becomes a monotonous round of calls. He has no time for parties, theaters, any diversion. He works day in and day out, and in the end just makes a living, and to stand-off the landlord or some of his creditors "till I get some money in." If the doctor could even for a moment see himself as the laity sees him, he would come down out of the clouds of self-conceit to the firm, hard ground.

The dear public hands us a little "schmooz" about what we are doing for suffering humanity, what a noble profession we have, and we swallow it hook, line and all with modest, downcast eyes, while the patient on the outside laughs at how soft we are.

Let us get together, devise some plan by which we can get proper compensation for our services, and which will react to the benefit of the community at large, increase the respect among the laity for our knowledge and ability, and relieve us of this criminal practice of aiding in felonies. In a legal sense, stealing more than fifteen dollars, I believe, is grand larceny. Morally speaking, is it any worse to steal outright than it is deliberately to refuse payment for just services?

R. C. MURPHY.

Chicago, Ill.

Our Lethargic Profession

Your ideas, as expressed in your editorial, "Our Lethargic Profession," are good, especially as applied to the dispensing physician.

We have no association or union of any kind that really protects, or works for, the interest of the dispensing physician, and, inasmuch as CLINICAL MEDICINE has broached the subject, I am at a loss as to where to look for a better leader or organizer of a movement of this kind than right there, in the journal office.

You have a fairly good-sized army at your service already, and I believe that, since most of them are dispensers, they would be willing to aid you to perfect our organization. From the perusal of your journal for several years, I gather that most of your subscribers and contributors are livewires, and a bunch of livewires would be a dangerous thing to handle for some of our political friends who are always trying to force some new-fangled antinarcotic or antidispensing law upon us.

I believe that you and your followers are the very ones to start something, and I should willingly assist you as much as I could. I should be glad to hear, through the medium of THE CLINIC, what others think about it.

E. P. ZEUMER.

Harrison, Ohio.

[CLINICAL MEDICINE is always at the service of the profession, either to lead or follow. But first we must have a "program," and it is for this purpose, to get one, that we seek the opinions of our readers.—ED.]

One Plan for Arousing Interest

You deserve a very large vote of thanks, from those of the medical profession who are not asleep, for your ringing words in defense of the rights of dispensing physicians. But how shall we wake up

the large majority of our brethren? I have been amazed at the absolute ignorance of nine out of ten doctors with whom I have talked on the subject of laws designed to prevent self-dispensing; and most of them, when I speak about it, say that "they will never pass such laws." They think I am only borrowing trouble; but I know that if we do not get busy we shall be in a bad way before long.

We have a law in Connecticut that works unnecessary hardship on the physician, though it is not as drastic as the druggists desired. It is a nuisance, nevertheless. If we dispense a dose of morphine, cocaine, codeine or heroin, we must write a prescription and keep it on file. That is not hard for me, for I seldom use those remedies; some of my friends, however, must be kept busy writing them, or else evade the law. When are we doctors going to wake up? The laity are told by many druggists that the physicians are not competent to dispense drugs, and, yet, the bulk of what the druggists themselves dispense comes to them ready put up by manufacturing houses.

It is about time something were done. In talking with a druggist recently, he admitted that the dispensing physicians were taking away their profits and declared there should be a law to stop that kind of practice. They do not seem to realize that these days doctors prescribe much less medicine than they used to do; many of them prescribe nothing at all for many of their patients.

The doctors who are doing the work, and many of whom are barely making a living, have not the time to attend hearings on medical bills, most of them never know what is going on, while the bigguns, who have the most to say, either do not practice except in the hospitals or always write prescriptions. They do not practice in the country or down among the workers. But, like the Pharisees of old, they lay upon their brother's shoulders burdens grievous to be borne and will not touch them with one of their fingers.

The A. M. A. is working for the betterment of the profession, and dominates the state societies. What is it going to do—what has it done for the average physician who *must* dispense or go to the wall? How does it stand? If the A. M. A. were to take hold of the cudgels, in favor of dispensing physicians, do you think these laws would pass?

Can we not devise some means of waking up the profession? What would you think of a small "tract" on the matter that would embody some of the bills already passed, together with pertinent editorials, and which could be printed in quantity for a very small sum and sent to physicians by those of their friends who *are* awake?

EDWIN C. M. HALL.

New Haven, Conn.

Take a Mail Course in Pharmacy

I have read your editorial, "Our Lethargic Profession: How Can We Wake It Up," and want to make a suggestion.

For myself, because it is perhaps my nature to want to fight when my plans are opposed—and according to the letter I wrote you recently, "The Roundup of the Doctors"—I am in favor of concerted aggressive action. My suggestion is this:

Let every dispensing doctor at once take up actively the study of pharmacy—taking a mail-course in a well-recognized school, if he cannot leave home for the entire course, up to the point where he must attend in person in a school in order to obtain a legal diploma. This will enable him to pass the state-board examination and to register, after which his handling of his own drugs will be as legitimate as that of any regular pharmacist. He can write prescriptions and file them (I have done this, anyway, for years, for my own convenience) and in all respects fulfil the law. And he will be by so much the better doctor.

Whatever others may do, as for me, I have about made up my mind to take such a course.

The proposition to start a physicians' drug-house would be futile, since any such institution must be subject to any law passed.

M. F. CUPP.

Metamora, Ind.

[A course of the kind described by Doctor Cupp, an excellent one, is given by The National Institute of Pharmacy, 536 South Clark St., Chicago, Ill. —ED.]

How Can We Get Down to Business?

Referring to your article entitled "Our Lethargic Profession," I wish to say that the question of how to "waken" it is one of the most vital importance. The medical profession has long been a "joke," from the standpoint of business and business methods. Our county and state societies meet and discuss every other phase of our work, and we are making good in every line of our professional endeavor, except as "business men." Whenever the financial side of the profession is touched upon, it seems as if no one cared to commit himself.

The average physician appears to feel that the financial side of the practice of medicine is "unclean" or that it is beneath the dignity of the physician to discuss it. We work, and work hard, night and day, rain and shine, and in the vast majority of instances without any definite understanding with our "employer" as to when he is to pay for our services, if ever. And it is for this very reason that the average physician is always in debt and hard pushed for cash with which to meet his bills. I see no reason whatever why the doctor should permit any man who calls on him to run up a bill of from $5.00 to $100.00 without some definite arrangement to pay, any more than the butcher or baker or grocer.

We are organized into societies and are putting forth our best efforts in behalf of the people we serve, and we meet and give each other the benefit of our experiences, and I think that we could well and profitably add at each meeting a few of our financial experiences.

We have a few good collectors among the doctors in each county, men who are well thought of and respected by the laity; but who get pay for the work they do. Let them tell us how they do it, and then let us all try to profit by their experience. In reality, I believe that the physician who collects his bills and who is known to be "the doctor who expects his money" enjoys a greater respect from his clientele and the public generally than the "easy-going doctor" who has the reputation of answering every call made on him and never asking about his pay. The doctor who does collect for his services is enabled to meet *his* obligations promptly and thereby gains an added respect among business men.

The doctor who fails to collect for his services in the long run loses the respect of even those

for whom he has worked and failed to collect from. Even they lose respect for him, and should he ever make an effort to collect from them, nine times out of ten they not only will put him off, but, if pushed very hard, will ultimately call some other physician, pay him the cash for his services, and end up by abusing and talking about the "easymark" whom they used so long and whom they never paid. All these things, and more, I have seen repeated many times over in actual experience.

There is absolutely no sense in it. Our profession might just as well be on a sound financial basis as to be where it is. We have organizations in nearly every county in the United States and could just as well take this matter up, as we do others, and handle it in a business-like way. Decide on a just and reasonable "fee-bill," and stick to it. When a man is known to be able to pay his doctor and, yet, refuses, let the next physician he calls "cut him out" until he does settle up.

Do not let me be understood that I am not charitable and willing and anxious to look after the needs of the deserving poor; also those who have met with unavoidable reverses and who are temporarily unable to pay. It is the fellow who uses one physician just as long as he can without paying him or making any effort to do so; then, when he can no longer induce physician number 1 to go, calls physician number 2 and uses him in the same manner, then on to number 3, and so down. The fellow usually manages to find some fault with the physician when he can no longer use him and proceeds to "pay" him by "knocking" on him at every possible opportunity.

This is the class I am after. These people could all be reached and made to pay if they were promptly reported to a standing committee appointed in each county medical society to handle this class of people, and which could also have charge of fee regulation for the county.

Concerted effort and a sticking together of the members of our societies would very soon, indeed, get a line on all the "deadheads" in each county, and they could very shortly be made "Christians." They would soon learn to respect the physician, would pay him for his services and both he and the hard-worked doctor would be better off.

I fully realize that this article will bring down about my ears a veritable "hornet's nest," but I speak from actual experience and honestly believe that such measures will have to be undertaken before real and lasting "converts" can be made of the class of patients described and before the physician will be able to get just remuneration for his services from this class. However, I should be glad to hear from others on the subject.

FRANK L. VAN ALSTYNE.

Winthrop, Ark.

Why Doctors Dispense and Druggists Prescribe

As a physician who has been dispensing his own remedies ever since leaving college—seven years—I am interested in all that I read on the subject of self-dispensing. However, in all these years of reading I never have come across an article that named the real basic cause of the self-dispensing by doctors or why druggists prescribe. This fundamental cause, I hold, is *economic stress*.

Doctors, all must admit, did not deliberately choose to dispense, neither did druggists wilfully elect to prescribe; but both sets of men have been driven to do these things by force of circumstances over which neither had any control.

When doctors were comparatively few, the doctor made a good living at merely prescribing, and the idea of furnishing his own remedies never occurred to him. By and by, when doctors became numerous and competition keen, the doctor found it harder and ever harder to earn a fair living; and the more enterprising members of the profession began to furnish the remedies themselves, in order to increase their dwindling incomes.

The same thing may be said about druggists. There being too many drugstores, the druggist found it hard to make a living at filling prescriptions; so, he took to prescribing as a duck takes to water, to increase his income. In their struggle to make a living neither party is to blame. Moreover, precisely the same keen competition is operative in every other profession and trade.

As to the remedy—there is none, and none is needed. Let those druggists prescribe who desire to do so; let those doctors dispense who choose.

Let the American people decide whose services they need most, and prefer. If the doctors cannot withstand the competition, they should vacate the field to the druggists; and *vice versa*.

It may be added that the ease and cheapness with which dispensing may be done, as well as the increasing poverty among the people, are additional factors tending to promote dispensing among physicians.

I do not favor special legislation to aid either class in this conflict. If the druggists are so foolish as to believe that any amount of legislating can stop the operation of economic forces, let them go to it. They will soon learn the error of their ways. This war on the dispensing doctors will fan the flame of the conflict and will make short work of the instigators.

No amount of special legislation by the "parasite of property" can keep me from dispensing my remedies. Put that down. As long as I practice medicine on my own account I'll do as I please, so long as I please to harm no one.

When the community offers to employ me and pay me a salary, the same as it does in the case of the postmaster or teacher, I shall be willing to prescribe, if the community prefers. Meantime, no amount of coaxing, bulldozing, lying or intimidation will do the least good. My constituents have just so much money to spend on doctors and drugs. What they thus have at disposal happens to be none too much for my own requirements, and I shall divide up with no man, fight or no fight. Here goes!

M. SHADID.

Carter, Okla.

The Profession Should Fight

In the matter of attempted legislation hostile to the medical profession demanded by the druggists' associations for their own mercenary and commercial advantage, it seems obvious to me that the state medical society of each state should at once wake up. Legislative committees should be appointed without delay, and these should employ attorneys, if necessary, to oppose all legislation already enacted and to protect the public and the medical profession in their vested rights and against the tricky commercial schemes of certain druggists' associations, the members of which are responsible

for fully nine-tenths of all the drug-habitués in existence, because of the unauthorized refilling by them of prescriptions and the unqualified prescribing over the counter for their own mercenary gain. I firmly believe the American Medical Association should, in the same way, look after all legislation in Congress.

Unless something of this kind is done, and done quickly, new state and national associations of dispensing physicians will be formed to defend and preserve their ancient and vital rights which enable them to render their most prompt and efficient service to the public.

Personally, I have had better success and a much-better pleased clientele since I have dispensed my own remedies, and they get no needless or harmful dope.

E. A. SANBORN.

Somerville, Mass.

Professional Evolution

In your recent editorial, entitled, "Our Lethargic Profession," you ask, "How can we wake it up?" Why, bless your soul, the medical profession is the most wide-awake, up to date body of men on earth, of men banded together to keep the druggists from getting our scalps. Nothing of the kind suggested is at all necessary. For, by the inexorable process of evolution, the prescription-druggist is being rapidly and surely eliminated; in fact, he is all but obsolete now, and the only thing you need do to meet their frantic efforts to get the doctor's business or his scalp is merely kindly to suggest to them that they call in the undertaker in their own behalf.

Medicine, to be successful, must remain a profession. Just as soon as doctors organize for commercial purposes, they begin to degenerate. Look at the A. M. A., with its *Journal*, its Council of Pharmacy, and its propaganda for reform. It certainly does have a very close organization; but, just as certainly our A. M. A. is at least fifty years behind the times. In fact, the Council of Pharmacy is all but obsolete.

I buy my medicine from a dozen of the leading pharmaceutical manufacturers in the country. Their salesmen come to see me regularly—and a wide-awake lot they sure are. Through them, I find out what other successful therapeutist are using. We doctors have a fashion of exchanging our favorite things through these hustling fellows. Why, one can learn more practical therapeutics in this manner in six months than he could get from reading *The Journal* of the A. M. A. for a hundred years. Of course, we read *The Journal of the American Medical Association*, for it is necessary to take a glimpse into the dead past once in a while.

For the fun of the thing, just invite a dozen or so of salesmen to call on you and have them tell you all about it. I think what you hear and learn will be a surprise, and it will verify my statements.

W. A. MARNER.

Miles, Iowa.

CHYLURIA: ETIOLOGY AND PATHOLOGY

Chyluria is a disease of long duration, ten to forty-seven years (Purdy, of New York), and traumatic in origin, although the injury may have been forgotten or overlooked. This is especially true of cases occurring in this country. I also believe that those cases recorded by different writers as due to the filaria sanguinis hominis have the same etiology in foreign countries as we find in this country, viz., traumatism, if the history of each case is carefully interrogated. I find, by reviewing the literature of this disease, that in hot countries this worm is common especially in South China, where one in ten of the inhabitants harbors this nematoid worm, and, yet, they enjoy good health, and chyluria is not more common than in this country.

Let us reason. If the size of this embryo is only 1-3500 inch in diameter—just the size of a blood-corpuscle—how can they obstruct the capillary vessel? They can not, unless there was previous abnormality of the capillaries. No less authority than Purdy, of New York, says they cannot obstruct capillary circulation; but he admits that the ova, if unhatched, possibly might. This implies a doubt. The same argument holds true for the bilharzia hematobium, which is as frequently found in the blood as the filaria. Yamane, of Japan, found in a well near Nagasaki a parasite not unlike the embryo of the filaria found in the blood.

Murata collected eighty-two cases of chyluria in the Empire in ten years. If this is true, it furnishes some evidence of the parasitic nature of the disease, but it does not exclude traumatism as the etiological factor in the majority of cases.

Chyluria is found in every part of the world, while filaria sanguinis is found only in tropical or hot countries. The lymph-, or chyle-, fistula has not been found, so far as I know, although the Boston case strongly indicates one, notwithstanding the filaria were found. The record reads as follows:

"A man 57 years old, who had lived in Florida for a while. He could bring on chyluria by lying down for an hour and more readily if he lies on his back, than on his side. Can we regard this case as due to faulty assimilation as some claim?"

The natural history of the filaria has been elucidated by many authors, especially Manson and MacKenzie, who claim the parent worm lives in the distal end of the lymphatic glands—they are oviparous and their eggs are arrested in the glands and hatched there. The free embryos pass along the lymphatic vessels and enter the circulation, resting in some organ during the day, and circulate in the blood during the night, or they rest during the sleep of their host. Who can believe

this nematoid worm is not cognizant of the welfare of its host?

Manson describes four varieties: (1) filaria nocturna, which is found only in the night; (2) filaria diurna, found only in the day; (3) filaria perstans, always present in the capillaries; and also (4) the filaria Demarquay, known as the half-size. Whether this latter class is a distinct species or a half-grown form he leaves for us to judge.

Filaria diurna and perstans seem to be confined to the western part of Africa, while the nocturna is always present in the tropical countries; to which must be added a few, mostly imported, cases in the United States, as the Vickery case of Boston already referred to, the Flint case of New York, and the Henry case of Philadelphia.

Study of the blood of 60 negroes, or Bantu race, of the different tribes of the Congo State showed that the embryo of the filaria were present in the majority, thus indicating that the negro is the preferred host; while chyluria is rare. The Osler case of Montreal gave no proof of its cause, even under minute dissection. All diseases of the lymphatic system, and such diseases as cancer, typhoid fever, tumors, pneumonia, and even pregnancy (as the Francoti case of Japan), have been claimed to cause this disease; even faulty assimilation, as Rossback, of Germany, claims. The objection to the latter's claim is that no fat has ever been found in the blood.

Finally, let us hear Dr. Patrick Manson's confession. The Doctor amputated a lymph-scrotum and found part of the worm on the cut surface and the other part in the lymphatic vessel. From this circumstance, he formed the opinion that the worm lives in the distal end of the gland and the free embryos pass into the lymphatic vessels, as already stated. In the London *Medical Times*, he says that some of the phenomena may be explained in this wise:

"The parent worm being located in some lymphatic channel of a patient, instead of throwing off filaria alive and with a diameter of 1-3500 inch, aborts and throws off eggs before the embryos are fully developed. The eggs having a greater diameter, may plug lymph-vessels through which filaria would pass. The current being arrested, the vessel becomes distended behind the point of occlusion, and the result is lymph-scrotum, chyluria, etc., with all of the symptoms of inanition which attend the course and death of these cases; even the degeneration of all the organs, including the skin, are the result of starvation. This degeneration affects every tissue, even the brain, which is indicated by a growing mental weakness. This dementia and expression of senility should always direct our attention to the urine, and a test for chyle should be made.

"The urine test is simple and made in the following way: Fill a test tube two-thirds full of urine, add 1 dram of ether, and shake. A white cream will rise to the top in the tube leaving the urine clear beneath. This cream is a fat emulsion.

"Albumin is also found as globulin, peptone, alkaline albumin, but serum-albumin is found only late in the disease, or, in other words, at that stage of the disease when the epithelium of the kidneys fails *in toto* or in part; then serum-albumin may coexist with the other forms that are common to chyle.

"Fibrin in variable quantity, from a small amount to a quantity sufficient to cause spontaneous coagulation of the urine, even in the bladder, may be found. Indican frequently is found, although not every day, apparently intermittent."

In support of the etiology and pathology set forth in this article, I offer the following record of a case:

On the 20th of July, 1913, I was called to see a boy 14 years old, with the following history:

Four years ago while at school this and some other boys were rolling big snow balls down hill. He passed over one of them head foremost, striking on his abdomen, and injured himself so it was necessary to carry him home. (No doctor called.) After a few days he so far recovered as to be able to attend school.

From this time he began to waste in every tissue, even nerve-centers as well as the muscles. His mental growth checked, yes, even a retrograde state of intellect followed. Hematemesis and dysenteric discharges occurred weekly for a day or two during the first few weeks after I was called, but none of late. Complete anorexia for days, with absolutely no sense of hunger, no pain or insomnia; would sleep most of the time; ematiation became extreme; the cutis perished and desquamation was complete; nothing but skin and bones remained.

At this stage a voracious appetite, with anasarca (chyleous) developed, and after a few weeks chyleous ascites. Aspiration of three quarts and examination of the same showed it to be mostly chyle. He had subnormal temperature from the first, and therefore the desquamation was not due to fever but to the want of nutrition.

Anuria also came in for its share in the trouble, but, strange as it may seem, no suffering came from it, even though the bladder was full; and after a few days urination became free. This condition is known as spontaneous coagulation in the bladder.

The question of spontaneous coagulation is one over which many a hard battle has been fought; however, I am quite willing to accept the following: "Whenever nutrition is suspended or greatly diminished in a part or in the body as whole, products of decay are produced, and from this a ferment known as fibrine-ferment—not fibrine, but similar in action. No blood was ever found in the urine, nor tube casts or embryos of the filaria sanguinis."

Urine always was alkaline; specific gravity 1012 usually; chlorides, 12 percent per volume; phosphates very low, 5 percent per volume; urea, normal, 10 grains per ounce; indican, in great excess at times; chyle, always found in large quantity; albumin, a trace, or, in other words, 20 grains to the liter, by Esbach's method.

The keeping qualities were greatly enhanced, keeping for months without decomposing. This fact has been noticed by other observers. Oxidation, however, causes the milk-like appearance to change to a deep-blue whenever indoxyl potassium sulphate is greatly in excess. The alkaline urine is due to the fact that the content of the small intestines and chyle is strongly alkaline; whenever this passes directly into urinary system the result is alkaline urine.

Examination of the blood by the use of hematocrit gave 40 volume percent, or 2,000,000 red blood-corpuscles to the Cc. of blood; also 40 volume percent of white, 20 volume percent of liquor sanguinis, and hemoglobin, 20 percent by von Fleisehl's hemometer.

The microscopical examination showed the blood-cells contracted and serrated, somewhat like postmortem blood-cells, wanting, however, the true raspberry appearance. No embryos were found. The patient still is iving, but not likely to recover.

C. C. Perry.

West Rutland, Vt.

RENAL COLIC—A PERSONAL EXPERIENCE

I have read with much interest Doctor McMechan's article in an old Clinic on "Impacted Renal Calculi." I was the more particularly interested in the article, from the fact that once (in 1886) I had about six months' personal experience in passing two renal calculi, several weeks apart.

At that time we knew nothing of the value of the hyoscine-morphine combination, and I relied on morphine hypodermically to relieve, or rather to ameliorate, the excruciating pain. I drank Buffalo lithia water by the gallon, without apparent benefit, and finally fell back on flaxseed-tea to flush the urinary tract, and morphine hypodermically to afford some relief.

No one who has not had kidney colic knows what pain is. The passage of the calculi from the kidney (the right) to the bladder was a campaign long to be remembered by your humble servant; and their passage from the bladder through the urethra was far from being a holiday picnic. One of the calculi became lodged in the urethra for about twenty-four hours, and I drank flaxseed-tea, I dare not say how many pints, in order to enable me to force the stone through; which finally I accomplished by compressing the end of the penis and distending the urethra, and by straining.

I do not believe that lithiated drinks will dissolve the calculi in the kidney or during their transit, and that the most effective relief will be best afforded by flushing the urinary tract with copious emollient and mucilaginous draughts.

Geo. D. Stanton.

Stonington, Conn.

[Has anyone any suggestions to offer?—Ed.]

IPECAC AND SOLANUM

In reading the last few numbers of Clinical Medicine I have noticed quite a number of articles about emetine in dysentery, all of which have been interesting, although I am sure you will find, upon perusal of eclectic literature, that ipecac has been the sheet-anchor of this school in the treatment of dysentery for something like twenty or twenty-five years. Their literature speaks of ipecac in a general way as follows:

"This is especially the remedy for acute diseases of the mucous membrane of the intestinal canal, whether diarrhea or dysentery. It is also our excellent remedy for nausea when the tongue is elongated and pointed."

I use it as follows in acute dysentery or diarrhea: aconite and ipecac (Lloyd's), 10 drops; water, 4 ounces. Take one teaspoonful every hour.

I have used it for fourteen years and have never lost a case up to the present time. Of course, other indicated remedies are used as required, but ipecac forms the foundation of the treatment. I do not remember having used any bismuth or any of the opiates in the treatment of dysentery.

Then, again, in the last journal you speak of solanine in whooping-cough. In my hands it has everything else "beat a block." It lessens the spasm and undoubtedly shortens the course of the disease.

I have been using Lloyd's specific medicine in 5- and 10-drop doses for five or six years, and it is rare that I use anything else for this condition.

You might ask the "brethren" to try it in all spasmodic conditions, especially in spasmodic dysmenorrhea. In the last-named condition it can be used in half-dram doses every two or three hours until effect.

Personally I have never noticed any toxic action manifest itself, and I have given quite large doses, even to small children. I have given 5 drops of Lloyd's specific every two hours to a child 8 months old, with only the best results. I sometimes combine it with belladonna, but I believe it works as well alone as when combined with other drugs.

I have never used many of the active-principle preparations, but have always stayed pretty close to the specific medicines, as I have always obtained the desired results from them. Still, I am going to give the alkaloids a trial.

E. P. Zeumer.

Harrison, Ohio.

[Ipecac has been used as a remedy for dysentery for many years, and till recently it has been the best thing available for the tropical form of the disease. Unfortunately it has not been generally used on account of the awful, deathly nausea which it produces when given in the enormous dosage necessary to make it effective. From 30 to 60 grains of the powdered root were required, and frequently the patient found it impossible to retain this dose. Rogers discovered that emetine was more effective than ipecac, that it was much more certain, that it could easily be given hypodermatically, and that it nearly always *cured* the disease—often within a week in cases of months and even years standing. Since we have an effective, well-tolerated and easily administered alkaloid it is just as foolish to use powdered ipecac in tretaing dysentery as it is to use powdered cinchona bark in treating malaria. Don't you think so?

We are glad to learn of Doctor Zeumer's favorable experience with solanum. However, we are sure that when he has become better acquainted with the alkaloid, solanine, he will use the latter by preference. We hope the brethren will follow up his suggestion as to its value in spasmodic conditions, especially dysmenorrhea. Lloyd's specific medicines are indeed good. We are glad to add a word of praise for these fine preparations.—Ed.]

INANITION FEVER

I was greatly interested in Dr. M. Shoyer's article on the "Inanition Fever of the Newborn," page 531 of the June number of Clinical Medicine. I discovered the same trouble some ten years ago, but, never having seen or heard a word about the conditions, I did not have a name for it. However, I found that hot water and 10 drops of sweet cream to the ounce would quickly cure the trouble; and I have been using that treatment ever since then in all such cases with perfect success.

The profession surely is under obligations to Doctor Shoyer for giving us the temperature and other data. I had never taken the temperature, as I considered the trouble simply caused by hunger, because the mother's milk had not come.

Thomas W. Musgrove.

Sultan, Wash.

INANITION FEVER — ANOTHER REPORT

First of all, I read Clinical Medicine, and I like it very much. In looking over the June number, I was attracted by the article written by Dr. M. Shoyer upon "Inanition." I believe that I have also found the same thing he speaks of in children that are much older, say, three months or more. I have found their temperature below normal, as low as 97° F. due, I presume, to weakness. I have tried the boiled water and normal salt solution, but believe that a little barley-water added to it does some good. Giving just a little nux vomica along with it I think does good also. Yet, I have lost my share from this cause.

The question of diet is important in treating these little sufferers; still, in a country practice, where it is not possible to look after the preparation of food, it is almost dangerous to let the child have anything at all.

Have any of you ever tried treating the mother?

R. B. DOUGLAS.

Shelburn, Ind.

THIS BABY WAS "COOKED"

As to Dr. Mayer Shoyer's cases of inanition fever reported in the June CLINIC—were they born during a hot-weather spell and "cooked," as illustrated by the following?

On June 13, 1913, I delivered a multipara of a normal male child of about 7 pounds' weight. Forty-eight hours after, I was called to see the child. The mother told me the baby had cried all the night previous and so far that day; also that it was broken out all over with "eczema." While listening to her report I looked for and found a fan and then went to the window to let in a little air, remarking on the excessive heat—this being at 104 degrees in the room.

The little child lay fretting on the bed back of the mother, in a corner of the room. It was dressed for Christmas weather and covered with a blanket in regulation fashion, "so that the light couldn't strike his eyes." Taking it up, I found the child covered with papules, the forehead just matted with them. Its clothes were moist; the rectal temperature was 103.5° F. Besides the regulation baby outfit of underwear, band, and underskirt, the poor thing was wearing a starched gingham dress three feet long!

I insisted that the child be undressed and bathed, and ordered that it be given plenty of water, whether it was nursing or not. (It had been urinating very little.) A little zinc-oxide ointment was rubbed on its face and talcum powder dusted over the body. I had considerable work persuading the mother (whose eight children still survived in spite of her "care") to permit the child to lie uncovered through the hot day, dressed only in its diaper and shirt. The bath soon stopped the fretting, and the eruption promptly faded, and the child got through the hot weather in good shape. I may add that the child's temperature was as stated (103.5° F.), because for days I was obliged to cool the thermometer in a glass of water, in order to shake it below 98° F.

SAMUEL ADAMS.

Niles, Kan.

INANITION FEVER

After reading Dr. M. Shoyer's article on "Inanition Fever" I feel like making a report on three similar cases of mine; adding, that I searched all my books and journals, but failed to find anything satisfactory regarding the same.

Case No. 1. Mother well; strong and healthy. It was her first child; a little fellow, of average weight, but strong. About twenty-four hours after delivery I called to see them and found the baby with a temperature of 101 degrees. I put him on cool boiled soft water for twenty-four hours, then ordered added one teaspoonful of the mother's milk to the course of water. The child was well in about four days and then was put on percentage feeding; later, about the fourth month, being given buttermilk. He is now a big, fat prize-winner.

Case No. 2. About thirty-six hours after the birth of the child I was called in. The baby was not doing well, had a temperature of 100° F., and this rose to 102 degrees the second day. It was put on the water and milk dilutions, and in about five days it was well. The mother was strong and healthy. This was the second child, and I put it on the breast and had no more trouble with it.

Case No. 3. This ended fatally. The family lived some distance in the country, so, I gave instructions for the care of mother and child and directed that if anything happened to let me know immediately. In about five days they called for me, but not being at home, they called my doctor-friend. When the latter examined the baby he found its temperature 107° F. He was positive of this temperature, for he took it three times; while later we tested his thermometer together and found it correct. Doctor Smith saw the boy early in the morning, but when I arrived later it was dead, of course. This mother was not a strong, healthy woman, but the baby was a 10-pound boy and a fine-looking fellow.

In each of these three cases about the same symptoms were observed. There was restlessness, fever, face flushed, lips parched and cracked, body hot, pulse weak and rapid, and the baby emitted a feeble whine almost continuously. I regret that I can not present a better history and clinical record, especially of the third case, but I am positive that in the latter it was not later than the sixth day when the condition appeared. I have seen two or three other similar cases, but am not positive that they were of the condition described. These patients were all in the country and, needless to say, I had a hard time keeping the old-women's remedies out; still, I had my way. I could find no signs of bacteria caus-

ing this condition, not even in the third case, in which the temperature rose so high.

I. R. Fowler.

Louisville, Ky.

[These four communications are exceedingly interesting and instructive, since they deal with a subject upon which there is practically no literature. Yet it appears that the general practitioner is encountering the obscure condition of which Doctor Shoyer originally made mention in all parts of the country—for we may assume that these four reports, from east and west and south, are fairly representative of what is happening to others who do not find time or opportunity to write about their experiences.

Doctor Adams' case does not seem to belong to the group, and is of value to the discussion chiefly as pointing the difference between genuine instances of the sort that Doctor Shoyer reports and pseudo cases which may complicate the diagnosis. In Dr. Adams' case there was unquestionably a frank infection, probably of the intestinal tract.

The cases reported by Doctor Fowler bear dery suggestive ear-marks of an underlying vyscrasia of some kind—syphilis, or tuberculosis, or some other inherited infection. Especially is this true of the second case which proved fatal. One can hardly believe that an otherwise sound and healthy infant could run such a severe, almost violent, clinical course, and die within so short a time, sheerly from inanition.

Indeed, to be frank, the question still raises itself very seriously in our own mind whether any of these cases, including Doctor Shoyer's, can be regarded as due to inanition only. It is difficult to credit such marked clinical effects in an infant to such a cause. It would seem to us much more reasonable to postulate an underlying obscure infection, of which the inanition is but a secondary phase.

We have wondered whether some of these disturbances of metabolism and elevations of temperature in the newborn might not be the result of the introduction of bacteria into the gastrointestinal tract which we know occurs during the first forty-eight hours of infantile life. The child is born with an absolutely sterile alimentary canal; but in twenty-four to forty-eight hours it is literally flooded with a large variety of flora, which it is reasonable to believe must bring about a considerable reaction. It is quite possible that in a perfectly normal infant this reaction passes unnoticed, but that in other children it makes itself manifest in a rise of temperature and general metabolic disturbance, much as an inoculation does in an adult.

One thing is certain, however. The subject is a most interesting one, and worthy of study and investigation. And the only effective way of investigating it is through the observation and reports of the men in the field. We trust that our readers will not allow the matter to drop, but that we may hear from many others who have had experience. We also suggest that when such cases are encountered in future, a careful record of all the data be kept, with a view to a solution of the obscure problem.—Ed.]

AMENDMENT TO DR. P. T. GEYERMAN'S ARTICLE

Through an editorial oversight, the address of Dr. P. T. Geyerman, whose article upon "Pyuria" was published in the July number of Clinical Medicine, was omitted from the caption of the article. Doctor Geyerman resides at Hot Springs, South Dakota. Please look this matter up in your July issue and fill in the correction with pen and ink.

DR. A. ROSE PREFERS AETIOLOGY TO ETIOLOGY

Dr. A. Rose, of New York City, calls attention to the fact that in spite of our promise to spell standard scientific words in his little paper, published in the July issue, exactly as written, our typographer made the mistake of making him say etiology instead of aetiology. Our apologies to Doctor Rose. Although we cannot agree with him on orthography, we do try to give him a chance—always.

PLANS FOR A DOCTOR'S BUNGALOW

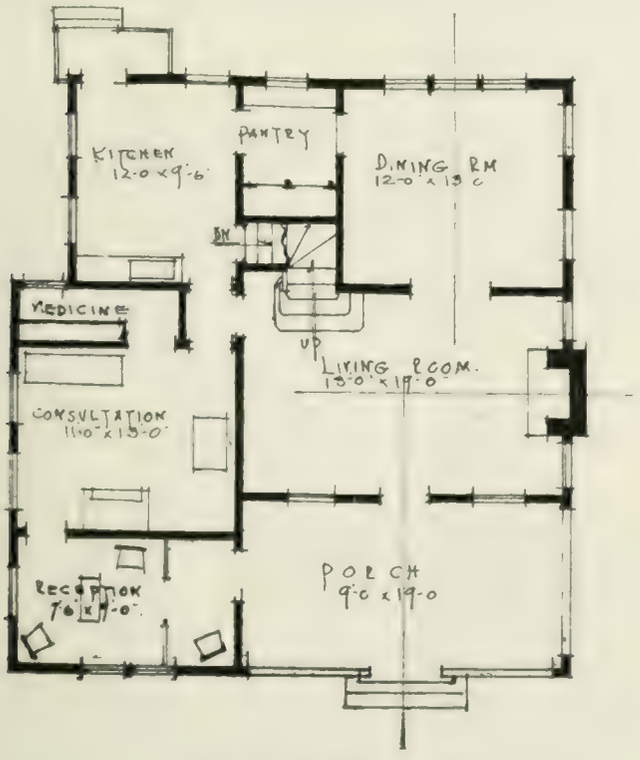
There seems to be a demand for a small house, or bungalow, which can be built anywhere in the country and which is large enough to provide the physician with an office in his own home. Mr. Arthur H. Busch, who has from time to time submitted house plans which have been published in this journal, this month sends us a sketch of a cottage which we believe will appeal to hundreds of physicians who are contemplating building. It is beautiful, can be built upon almost any site, in the country or in the city,

Sketch of a model bungalow for a doctor

is not expensive, and is admirably adapted to the physician's needs.

Examine the floor space carefully. It will be found that the doctor's reception room opens off the porch and is connected with a consultation room of ample size. Opening from this is a medicine closet, which can with a little rearrangement be converted into a laboratory if so desired. The arrangement of the living rooms will appeal to the doctor's wife.

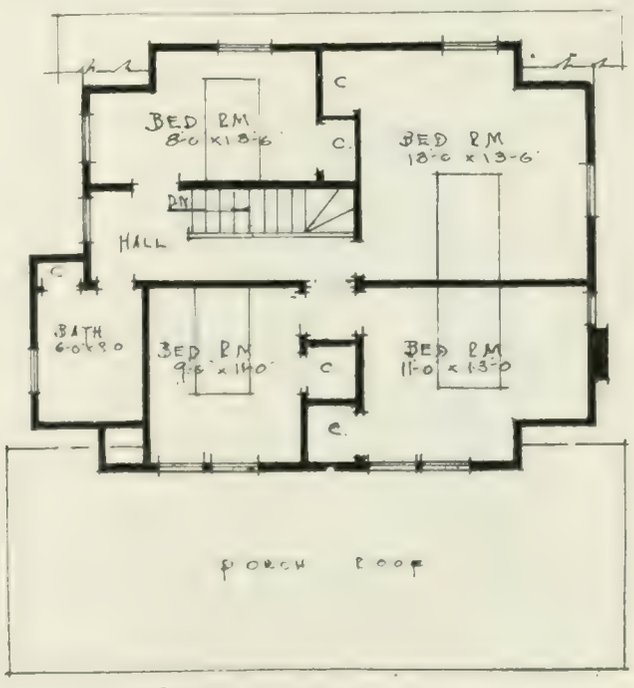
We are convinced that a great many of the readers of CLINICAL MEDICINE will want to investigate this house further. It may not please them in every detail, and minor changes may be required. Therefore we urge every reader of our journal who is considering the possibility of building a home to write at once to Mr. Arthur H. Busch, 1306 Gregory Ave., Wilmette, Ill. Whether you like this plan, or want something different, we hope that you will communicate with him, provided you have any thought of building.



First floor plans of bungalow

MEETING OF THE AMERICAN SPONDYLOTHERAPEUTIC ASSOCIATION

The third annual convention of the American Association for the Study of Spondylotherapy will be held in Chicago from Septem-



Second floor plans of bungalow

ber 21 to 24 with headquarters at the Hotel LaSalle. For particulars and programs the secretary of the organization, Dr. S. E. Bond, 207 N. 9th St., Richmond, Indiana, should be addressed.

The rapid acceptance by the best among medical men of spondylotherapy as a highly valuable branch of physical therapeutics is one of the splendid results achieved by the Association. The constantly increasing number of medical men in attendance at these conventions, embracing followers of all schools and members of the leading medical societies and colleges of the United States, is significant of the future status of a united medicine.

The coming convention, it may be stated, will fairly bristle with scientific, result-getting work for everyday practitioners. Prominent among the lectures to be delivered will be three by Dr. Albert Abrams, and these will cover the following subjects: (1) New data concerning Abrams' electronic reactions in diagnosis of disease and the making of records (pathograms). (2) New data concerning human energy, with instrumental demonstrations by the psychophanometer. (3) The employment of human energy in the treatment of disease (electronotherapy).

Besides the foregoing, Dr. E. N. Perdue, of Kansas City, will speak upon some of the newest advances in cancer research in the way of spondylotherapeutic diagnosis. Further, the latest mode of fulguration, by well-known eastern specialists, and some possibilities of the use of radium are among the subjects to be discussed. We cordially invite the medical profession to this convention "that's different."

S. E. Bond.

Richmond, Ind.

A TRIBUTE TO DOCTOR LOVE

I notice some kindly tributes to the memory of my friend, the late Dr. I. N. Love. And they are in their appropriate place, "Just Among Friends." I knew him well enough to know that that is the right place for all that may be said of him whose friendly face we shall see no more.

I. N. Love! At mention of his name a thousand pleasant recollections start into action, I had almost said into being, so entertaining and graphic the picture that rises before me. The sheeted ghosts of the past materialize and the cerements of the dead in Memory's grave are thrown off, and his real presence stands before me, transfigured and with outstretched hand. I seem to hear his voice and see the changing expression of his face as thought after thought sweeps through his mind, so strong was our mutual friendship when he walked the earth.

I remember his long visit with wife and family in my far-western home, our delightful rambles over the hills, the lingerings by the waterfalls and tuneful streams, our strolls with the birds and other wild animal life in the canyons of the mountains; and all the varying scenes in harmony with ourselves.

Love was an all around man. He loved the wisdom hidden in the books of his library by great minds of the misty past, and nothing in the present seemed to escape his observation. The common things of life that others might pass by without seeing would reveal to the eye of Doctor Love some hidden beauty of interest that would challenge his attention and deep appreciation. The cloud that floated overhead on invisible wings—he understood its purpose, that it was to fulfil some omnipotent law. The bird-song, the swiftly changing colors of the opalescent sunset, all, all were in harmonic concord with his great soul. Aye, had he lived longer into the ripening years of wisdom, he would have left a name and reputation not soon forgotten.

Yes, Love had faults, but they only emphasized his great virtues. His faults served to bring into bolder relief that other splendid side of his nature, as the storms of winter bring out the splendors of summer. He hated cant of every sort and in his heart of hearts he despised the hypocrite. He hated the strong that made a prey of the weak, he hated the self-righteous who was deaf to the appeals of the unfortunate.

And, so, knowing Doctor Love and appreciating his friendship that will always be a pleasant recollection, I come to lay this poor wreath on memory's casket where sleeps my friend unmindful of the unrest and hysterical throes that now convulse the social world, but will disturb his rest no more.

A. S. Condon.

Ogden, Utah.

JAMAICA, WEST INDIES

> Breathes there a man with soul so dead
> Who never to himself hath said,
> "This is my own, my native land?"

As a constant reader of Clinical Medicine, I can bear out numerous facts, veracities from month to month printed on its pages, yet, may have had my doubts of some of the varied experiences of some of its nu-

merous contributors. Now I know absolutely of one Munchausen story published in its columns. This bit of romancing is that portion of Dr. C. E. Witham's article on "My 6000 Mile Ocean Trip" (July, p. 615), referring to the Island of Jamaica in the West Indies.

That island being my native land and my home for the first twenty-three years of my life, it makes me rise to the occasion and to say that Brother Witham must have got his facts from some "dago" down in Lawrence, Kansas, as he surely could not have written thus had he really visited the beautiful island of Jamaica and met many of its numerous charming people. I must contradict his statements *seriatim*.

The sunken city of Port Royal is not to be seen and has not been seen by any but the legend-writers; and the good doctor even believes such rot as "his ship being tied to a buoy which is anchored to a church-steeple."

The natives, he tells us, cry out, "Stop Sam!" Surely, he must mean "Stop, sah!"—just as they say "sah" for sir in Alabama.

"The woman wants a Spanish quarter for the 25-cent American piece." He must mean an English shilling, for the English is the only currency the natives respect, although they will accept American money.

"In Jamaica it is a rare thing to find a person able to tell who his father is." This is a wholly imaginary assertion; but, then, he covers it by saying that it is the "statement of a missionary." The percentage of illegitimacy in Jamaica unfortunately is high, but only among the black native descendants of former slaves; our white population there is far more moral than the average white population in America.

Reminds me of the story the people here tell of the time when the old hotel in this town in South Dakota burned down they found forty-eight dead babies in the privy vault and under the floor. Of course, these presumably were not illegitimate children, according to Doctor Witham's conception, and they could each have told who was its father. I have been practicing in South Dakota for years and know its state of morals fairly well.

Doctors more than any other class should be careful in print not to give unreliable data, and Doctor Witham is given a hearty invitation to go down to Jamaica once again some day and see what a civilized and modern country it is.

My excuse for writing is, that I wish to correct the false impressions the readers of Clinical Medicine may get of that island, which is doing so much to attract tourists and to earn the reputation of the "most beautiful winter resort in the Caribbean."

R. Heslop-Payne.

Tripp, S. D.

INTRAVENOUS IRON MEDICATION

In compliance with your request for reports of experiences with the intravenous administration of iron, I submit the following:

I have been using this mode of giving iron for about five months, and in that time have treated 14 patients, and given a total of about 50 injections. I am employing a compound solution, containing in each dose of 5 Cc., approximately, as follows: calcium creosote, 3 grs.; iron phosphate, 1 1-2 grs.; magnesium glycerophosphate, 1-16 gr.; sodium chloride, 1-3 gr.; sodium salicylate, 10-16 gr. Mercury may be added either as the bichloride, albuminate or succinate, using 1-40 grain per dose; also arsenic in the form of sodium cacodylate, 2 to 4 grains, at the time of injection, if indicated.

Indications: Rundown conditions of the system generally; acid conditions of the blood, such as nephritis, rheumatism, pneumonia, tuberculosis in any form, anemia; gastric or duodenal ulcer; leg ulcers. In this last condition, the foregoing compound solution may also be applied locally, with great advantage.

The process of administration is very simple. Engorge the veins of the fore-arm or lower leg by means of a tourniquet applied above the elbow or the ankle, respectively. Sometimes a hot bath to the extremity is advisable, to distend the veins. Sterilize the seat of injection by means of tincture of iodine; or with a mixture consisting of camphor, 60 percent; phenol, 30 percent; alcohol, 10 percent; or with any other efficient antiseptic. Use a 10-Cc. syringe, preferably all glass, sterilizing it thoroughly.

Having drawn up 5 Cc. of the solution (one may use as much as 10 Cc.), pierce the vein chosen for the purpose, loosen the tourniquet, and begin to inject slowly, taking from three to five minutes to inject the entire amount. If in doubt whether or not you are in the vein, withdraw the piston of the syringe a little, when blood should be seen to enter the syringe. After withdrawing the needle, cover the puncture with a droplet of collodion. When this is dry, send your patient on his way rejoicing.

The injections are to be repeated every day in pneumonia, and every three or four days, usually, in other conditions. The number of injections will vary from 3 to 20, the average being about 6.

In the beginning, I used a solution which I bought for $3.00, later, for $2.00 an ounce. But I have learned to make a better solution myself for very much less money, so that I can afford to use it even in the case of poor and charity patients.

My results have been very gratifying. First, no unpleasant reaction, such as chill or the like occur. Next, the patient's hemoglobin rises about 5 percent and the red cells increase in number with each injection. The tired feeling improves very rapidly and is replaced by a sense of wellbeing; sleeplessness is replaced by sound and refreshing sleep (I speak somewhat from personal experience, as I myself have taken 8 injections for duodenal ulcer); weight increases. In the obese, it is said to diminish the surplus fat, but about this I cannot testify.

I trust that others may take up this method of intravenous medication and report results.

A. F. Burkard.

Omaha, Nebr.

TREATMENT OF APPENDICITIS

Ten or twelve years ago I was strongly opposed to operation for appendicitis, except as a last resort. The death rate after operation was high. It was some years before I met a case of appendicitis in my own practice. This was partly because I had learned the value of the cleaning-out process and cured many patients who otherwise would have gone to the surgeon as victims of the operative craze that set in ten years ago.

Later I found a considerable number of patients who, in addition to other abdominal disorders, had genuine chronic appendicitis. These I treated hopefully and persistently by resort to cleaning out, antiseptics, massage, vibrations, electricity, exercise, diet, tonics, and suggestion, but without securing a single cure. I have cured in dozens of cases that in the early days of this century were called, or would have been called, appendicitis by most physicians, but which lacked essential symptoms.

However, I have definitely given up all attempts to cure appendicitis. Some patients get well, with or without treatment. Perhaps nine out of ten will recover from a first attack. But most of those nine will suffer from chronic nervous or digestive disturbance and later attacks of appendiceal pain. And it is not possible in the present condition of medical science to say which of the ten will not recover without resort to surgery.

Early surgical intervention—given a reasonable amount of skill—involves practically no danger beyond that of the anesthetic, say, one death in four thousand. The patient is on his feet again in a week or less time, and the danger that would otherwise threaten him for the rest of his life has vanished. On the question of safety, there is no comparison between the two plans of treatment, the surgical and the expectant. The time of recovery is also in favor of surgery. The only disadvantage, from the patient's point of view, is that higher fees for surgery are customary.

Preventive measures certainly should receive full attention. Appendicitis is like most of our troubles in this, that it usually originates in constipation or intestinal stasis of some sort. In fact, if it were not for the results of alimentary autointoxication, nine-tenths of the members of our profession might give their attention to other pursuits.

T. Proctor Hall.

Vancouver, Canada.

WHAT'S THE USE?

Under the above caption (Clinical Medicine for March, p. 206) you say: "Brahmin and Buddhist came to the conclusion that nothing was any use; that world and life in it were irretrievably bad, and the best thing that could happen to anybody was, to get out of it. Yes, Gautama who, dying, gave as his parting message to man the words that cannot die, 'Be kind to all that lives,' he also found no heaven promising so much as nirvana —nothingness."

I had hoped that someome better versed in the eastern religions would discuss this subject. I feel that justice to yourself, in maintaining your well-earned reputation for fair dealing and unbiased judgment, as well as to your large "family" of intelligent readers, demands that you be not hasty in your judgment of one of the world's greatest teachers—Guatama Buddha, who meant as much to the people of his time as the Christ means to us. And, certainly, his teachings were beautiful:

"Cease to do evil."

"Learn to do well."

"Cleanse your own heart."

Nor would his precepts hurt the twentieth generation to follow:

1. "Refrain from destruction of life."
2. "Refrain from taking that which is not thine."
3. "Refrain from unlawful intercourse."
4. "Refrain from falsehood."
5. "Refrain from using intoxicating liquors or stupefying drugs."

But, I wish especially to call your attention to the modern translation of the much misunderstood word nirvana. This term should convey the idea, not of nothingness, but of "the highest spiritual attainment." I think the mistaken translation comes from the fact that it is regarded as the annihilation of the *personality* or *lower* self by its union with the *individuality* or *higher* self, a life of absolute *selflessness*, as opposed to one of *selfishness*, is "nirvana"—the goal set for human evolution during this dispensation.

One need not renounce his own religious convictions in order to recognize the truth and beauty in another; and you will find the beautiful poem of Sir Edwin Arnold, "The Light of Asia," quite entertaining and highly educational.

L. J. Coberly.

Oakesdale, Wash.

MORE ABOUT HOT-WEATHER TROUBLES

"Summer-complaint" is with us. The unfortunate sufferers diagnose it thus for us with their weary resigned voice. The following treatment of simple diarrheas has been effective in my hands:

A cool sponge-bath; a copious enema, either saline or soap-water; and the internal administration of arsenic trioxide, 1-100 grain, three times for one day. The patient is advised to rest in the recumbent position as much as possible during the day. Diet to consist of dry toast, custard, soft-boiled eggs, junket, beef-extract, buttermilk, and a little tea. I rarely find it necessary to resort to opiates to dope the bowels into rest.

Another self-diagnosed complaint is "heat-tiredness." Ever hear of it? Not a disease, but a very common complaint in this weather. When the temperature is high and there is great humidity, we are all liable to experience sensible perspiration, and we all know how uncomfortable that is. My only suggestion of treatment is based on that which we found as boys. Then we hustled to the river or the lake and—no, not bathed, just swam. Now I advise salt-water sponge-baths, used frequently. Natural salt-water is best, if that can be obtained, but a good substitute can be made.

W. R. Young.

Shelbyville, Mich.

SKIN ERUPTION AND BLOOD POISONING

On page 382 of the May number of this journal you ask, "What would be *your* treatment for the case described on page 379?"

As for myself, I should depend largely upon echinacea (specific tincture), to rectify the blood poison. Quinine, if there were marked periodicity. The tincture of chloride of iron, if there were dark discoloration of the mucous membranes, which nearly always is present in these cases. My dressing of the wound would be as follows:

If covered with a dirty-gray pus, cleanse it with hydrogen-dioxide solution, dress with tincture of iron, cover with gauze bandages or sterile cloths. If badly swollen and dry, apply alcohol locally and cover with absorbent cotton. Keep the latter wet with the alcohol, tincture of myrrh or glycothymoline. Either will answer. Here (in the swamp country), quinine in liberal doses is always curative. Keep the bowels open.

W. P. Howle.

Charleston, Mo.

APIS MELLIFICA

I have just finished reading the article in the June issue of Clinical Medicine, from the pen of Dr. Hoff, in which the latter calls attention to a "good old negro remedy," concocted from honey-bees, and I trust I may be pardoned for saying that my feelings on reading the article referred to were somewhat tinged with amusement.

To those of "us regulars" that have confessed the utter unreliability of the galenical preparations and the complete lack of definite knowledge regarding drug action contained in the United States Pharmacopeia and other fetishes of the regular establishment, and have turned to the homeopathic and eclectic schools for a comprehensive, scientific knowledge of our remedies, the therapeutics of apis mellifica is a matter of ancient history, inasmuch as this remedy has been known and used by the exponents of both of the above-referred-to schools ever since their earliest record.

I append herewith a brief study of apis, referring those who wish a more exhaustive treatise to the following authors: "Materia Medica and Therapeutics," Ellingwood; "Specific Diagnosis and Medication," Fyfe; "American Dispensatory," Felter and Lloyd; "Syllabus of Materia Medica and Therapeutics," Locke; "Reference Book to Specific Medication," Niederkorn; "Materia Medica and Clinical Therapeutics," Petersen; "Specific Medication and Specific Medicines," also "The American Eclectic Materia Medica and Therapeutics," Scudder.

Homeopathic studies: "Key Notes of Leading Remedies," Allen; "Materia Medica," Blackwood; "Materia Medica," Kent; also such writers as Anschutz, Bartlett, Baenninghausen, Bradford, Bray, Clarice, Dewey, Hale, Hering, etc., *ad infinitum*.

The common name of apis mellifica is honey-bee. The remedy is prepared from the entire live bee, in contradistinction to apis virus, which is made from the poison-sac and sting.

Preparations: Mother tincture and dilutions. Dose of the tincture from 1-2 to 5 drops.

Physiological action: Apis mellifica is a diuretic, diaphoretic, and alterative. It has a stimulating action on the kidneys, and causes irritation of the tractus urinarius. The ovaries and testicles (left especially) undergo mild inflammation, and there is tendency to dropsy. The entire cellular tissue is eczematous, which is attended with stinging, burning pains. The cutaneous surface shows urticarious inflammation, the areola being red and white. Vesicles may appear, the bone being bluish-red and hard. There are inflammations and dropsical effusions of the serous surfaces, while the mucous membranes exhibit catarrhal states, with an edematous tendency.

Therapeutics (homeopathic): Apis mellifica is the indicated remedy in cases that are characterized by an edematous swelling of any part, such swelling being attended with burning, stinging pains. The patient may complain of a bruised sensation. Serous effusions that are of inflammatory origin also call for apis mellifica.

The drug should be closely studied in cases of mental derangement. These patients are, as a rule, fidgety, silly, jealous, awkward, constantly dropping articles. It is of great service in meningitis, accompanied by effusion. The child is stupid, gives sudden shrill cries. There may be, to all appearances, a monolateral paralysis of the facial muscles, while on the opposite side there are convulsive twitchings of the face. Scanty urine, with no thirst, asthenopia, chemosis, irrespective of the cause, if attended with stinging, burning pains in the eye and hot, scalding tears. The lids feel stiff; they are edematous and show puffiness and baggy swelling underneath.

Edema accompanying laryngitis, pharyngitis or diphtheria, as well as scarlatinal inflammations yield to apis. Given any of the above states, accompanied by an intense redness of the throat, dryness, glazed appearance, stinging, burning pains upon swallowing, and apis mellifica meets all requirements.

Acute nephritis, with anuria, vesical tenesmus, with high-colored urine and pains in the bladder.

It should be closely studied and differentiated from kalium, apocynum, cantharides, rhus tox. The chief guiding symptom for apis mellifica is edema, retention of urine. Urinary incontinence, accompanied by stinging, burning pains, absence of thirst, patient's symptoms aggravated by warmth, ameliorated by open air, cold water and cold bath.

H. H. Redfield.

Chicago, Ill.

ORIFICIAL TREATMENT IN CHOREA AND CHRONIC HEADACHE

A girl of fourteen was taken with inflammatory rheumatism on December 28, 1913. Her temperature ranged from 101° to 104° F. for two weeks, and the swelling of the joints necessitated keeping the patient in bed. I dilated the anal sphincter with my fingers, and in a few days the swelling of the joints subsided, the temperature became normal—and then choreic attacks made their appearance. By January 21, 1914, the patient was bedridden. She could not stand on her feet; speech was unintelligible; she could swallow no solid food, could hold nothing in her hands, and had to be watched night and day to keep from rolling out of bed; she was unable to sleep. When moved from the bed to the operating-table, she jerked all over like a live eel.

On January 21, chloroform was administered to the girl by Dr. E. C. Smith, and her clitoris freed from all adhesions and the anal sphincter thoroughly dilated. When she became conscious again the twitching had practically ceased, and she now was able to eat solid food. On Saturday her speech came back and on Monday she walked. Since then she has been growing like a weed.

Another girl, aged 13, for years had been crying daily because of the pain from chronic headache. Glasses did not help the trouble. Her appetite was poor, her body badly nourished, she could not keep up with her classes in school, and all night long she would roll and toss about the bed.

April 10, 1914, chloroform was administered by Dr. E. C. Smith, and her clitoris was freed from adhesions; also four pockets and two papillæ were cut out from the rectum, and the anal sphincter was thoroughly dilated. The first evening after the operation she ate a hearty meal—and her appetite has been fine ever since. She slept all night when she dropped to sleep, and this has continued up to date. There is marked improvement in her studies. Best of all, her headaches have vanished entirely. Everybody is pleased.

Disease of the sigmoid flexure often will stimulate malignant diseases. Today, in consultation with one of the leading surgeons of this city, I demonstrated, with the Pratt sigmoid speculum and Hall's sigmoid irrigation, the presence of sigmoid disease in a woman whose case had been diagnosed as cancer of the uterus.

JOHN MERIWEATHER.

Richmond, Va.

[Allow us to congratulate you upon the excellent results you secured. We have urged such procedures time and time again, and this writer has employed it in several cases of petit-mal and chorea, with excellent results. We dilate the sphincter ani and circumcize as a matter of routine, and in more than one instance these simple operations proved all that was necessary to bring about recovery.—ED.]

NO SEPSIS HERE

You invite comment on "No Sepsis Here—Why?" Easy! Active immunity is brought about by the invasion of the system by pathogenic organisms. People who from childhood live in filth and squalor become immune to the sepsis-producing bacteria of their environment. In short, people are "immune to their own bugs."

If I have occasion to use the forceps in a hovel, I boil the instrument and cleanse my hands just as carefully as when I am taking care of the bank president's wife. And this, because I may introduce a new strain of germs to the parturient woman, and her resulting sepsis will be my fault and my conscience would never excuse me by faulting the filthy surroundings of the woman, for to these she is immune.

H. K. SHUMAKER.

Flat Rock, Ohio.

NO SEPSIS HERE—ANOTHER COMMENT

Commenting on "No Sepsis Here—Why?" page 441, May CLINIC, I wish to say: "God has provided for everyone according to his means." And, to one the Lord gives five, to the second, two, and to a third, one talent. One who has the knowledge and means is required to use them; from those who have less not so much is required, and, still, they are able to exist. Or, have we not a fair example in our natives, the Indians, or yet among our Southerners, the erstwhile slaveholders, during and immediately after the civil war? The refined slaveholders, after having been robbed of all belongings, were enabled to live in the woods, huts, and such humble places, as did the slaves—and in good health. Nature provides for such as can do no better.

R. WILLMAN.

St. Joseph, Mo.

THE LYNCH SCHOLARSHIP

Dr. Charles F. Lynch has established at The Terre Haute Veterinary College a free scholarship, to be known as the Lynch Scholarship, good for a complete freshman-year tuition, matriculation, and laboratory outfit, all of which will be awarded to the young man presenting the best essay upon the subject of "Hogs as a Source of Farm Profit." The contest is open to every young man of the United States and Canada who is between the ages of 18 and 45.

This is the only prize veterinary scholarship in the United States, and Doctor Lynch's desire in establishing it is, to afford opportunity to some young man to gain a good start in a good profession. Application-blank for entrance, and full particulars (date of close of contest, etc.) can be obtained by anyone interested by addressing (with self-addressed stamped envelope enclosed) Dr. Chas. F. Lynch, in care of the Veterinary College, as per above.

DID THE ETHER KILL THEM?

I wish to say a word about the article in the June number of CLINICAL MEDICINE, page 541, by T. F. Parker, on "The Contagiousness

of Diphtheria." In your comment you omit to say that the ether or chloroform given as an anesthetic is also an antiseptic. It seems to me that ether is decidedly a bug-killer. If I am right, the mask used on the boys was disinfected and could not have carried the germs.

THOMAS W. MUSGROVE.

Sultan, Wash.

"TURN BACK OR GO ON"

"Turn Back or Go On," which appeared editorially in CLINICAL MEDICINE, ought to be printed in pamphlet form and distributed free. My advice to every physician who takes this journal is, to cut out that article (June, p. 469) and paste it in his hat. That is what we all might do with advantage. Turn the crank again and grind out more of the same stuff, Mr. Editor, and future generations of doctors will (maybe) rise up and call you blessed.

GEORGE D. SWAINE.

Cleveland, Ohio.

EMETINE IN PERSISTENT HEMORRHAGE

About two weeks ago a neighbor physician told me of a case of persistent hemorrhage from the gums occurring in a man 72 years old. The patient had a blood pressure of 200, and was very feeble. The Doctor had used various astringents locally, also administered hypodermic injections of ergot, adrenalin, and morphine, but nothing seemed to do the patient any good. The bleeding continued in spite of everything tried. The Doctor said he was ready to adopt any treatment that offered hope of relief.

As I had only recently received some ampules containing emetine hydrochloride and had seen the articles in the March and April numbers of CLINICAL MEDICINE suggesting its trial in cases of hemorrhage, I suggested to my friend to give that drug a trial in his case. Accepting the offer of my emetine hydrochloride, he immediately gave one dose (1-2 grain), which was at 9 o'clock in the morning. By noon, the hemorrhage had entirely ceased. As a precautionary measure, to prevent recurrence, a second dose was given eighteen hours later. I have waited several days, to see the final outcome and am glad to report that up to the present time the hemorrhage has not recurred.

This gratifying experience has inspired in the mind of myself as well as of my colleague a strong feeling of confidence as to the value of emetine for suppressing hemorrhage. I certainly shall use it again just as soon as a suitable case presents itself, and hope that other readers of CLINICAL MEDICINE will do the same. In this way we may have a series of reports of the results obtained from this most interesting remedy.

WILLIAM SELLERS.

Junction City, Ark.

RECTAL HEMORRHAGE CONTROLLED WITH EMETINE

Three years ago last December I began treating a case of chronic ulceration of the rectum of long duration and causing much suffering to the patient, a woman of forty-eight years (married, no children). The trouble yielded slowly, but healed nicely by the following April.

Tenesmus and frequent desire to defecate were relieved, but when the bowels acted there always came blood mixed with the stool. Frequent rectal and sigmoid examinations revealed no ulcers, and I felt that the blood must come from leaking of the capillaries. In March last the hemorrhage became quite free, as much as 1-2 ounce two and three times daily. The usual remedies and astringents applied locally failed to check it. After reading the article on emetine in the March number of this journal, I concluded to try it.

I began, on April 5, with emetoid, 1-6 grain, four times daily. After four days, the bleeding was much lessened, and after two weeks it had ceased entirely. I had the patient take the remainder of the 100 tablets in the bottle—one tablet morning and evening of each day. Since the cessation, there has been no bleeding up to today, June 12. The constipated condition shows improvement, too.

W. F. SCHRADER.

Fort Wayne, Ind.

SOME OBSTETRICAL HINTS

In your next case of parturition, when the pains become weak and ineffectual, get your patient warm, and then have her drink a cup of real cold water; then note the increased power and forcefulness and efficiency of the next few contractions. You will surely be convinced that it is the best, safest, cheapest

oxytoxic on the market. I seldom resort to any other.

Be sufficiently alert to the gravity of the occasion and see to it that your patient is protected from nervous shocks and scares and worries. Give her sympathy, encouragement, and help—especially the latter. Ease off the rough, jagged edges of her pains; allow her to assume a comfortable position, and not enforce a constrained one. Donate your "britchen-harness" to some mule-driver, and she will withstand a hard labor and a few germs, and make a satisfactory recovery.

When called to a woman in confinement, clean up, put on your white robe and rubber gloves, and make yourself absolutely clean. Then go to work. Don't spend the valuable time sleeping, reading or washing your hands. If she really is in labor, sit down by her side, take hold of her hands, let her place her knee against your chest, and assist those pains to dilate that cervix. The fellow that howls the loudest about "meddlesome midwifery is the fellow that has the bad luck and complications. The overfastidious antiseptic crank, who stands aloof and treats his patient as though she had the smallpox or as though she were a skunk and might contaminate him, should be kicked out of the lying-in room instanter.

If you expect to be a great obstetrician, attend every case that presents itself. Don't turn anyone down on account of poverty. Every great surgeon knows he must operate in one-half of his cases for nothing, in order that he may become deft and proficient. Get the knowledge, tact, and deftness that you can get only from the school of experience. I have a good many cases labeled "R. F. D." (Rural Free Delivery); and so will you, if you ever expect to amount to anything as an obstetrician.

The Ohio State Medical Society met at Columbus last week and held a record-breaking meeting, both as to attendance and valuable papers read. Every section was full of listeners eager to hear and learn. But sad to say, so many of the papers on the most interesting and vital subjects were read so listlessly and in a low monotone that only a limited number of those near the speaker could hear what was said. Consequently those in the rear crowded forward or moved about and talked and joked, or they went out, thereby creating a disturbance, so that but little information was gained, and valuable papers were unappreciated.

I feel constrained to ask why it is that our brainiest students and scientific investigators, men who are just chuckful of knowledge, usually are such insignificant and unattractive-looking men and come on the forum so humbly and modestly, and will speak so doubtfully and cautiously and hesitatingly when making the most incontrovertable statement, while those pompous, bombastic, fine-looking fellows, who speak out in rich, melodious, sonorous tones, with such an air of confidence that would make black appear white, are always men with some kind of hobby. Verily, not all is gold that glitters.

DAVID E. SPAHR.

Xenia, Ohio.

CRIMINAL ABORTION

Allow me to offer just a little criticism of Doctor Nourse's paper (May, p. 449) entitled "Abortion—Pregnancy—County Society."

One would think, from the Doctor's language, that holding membership in a medical society would prevent abortions (presumably criminal abortions). Membership in a county medical society, lodge or church is no proof that the holder of it is not a "catheter-pusher." Within the last two years I have treated a number of cases of puerperal septicemia, and in every instance the patient gave a history of a criminal abortion, naming the operator, whom on investigation I found in each instance but one to be a member of the county society, and in most cases a big-mouthed member at that. The one exception was a retired physician and father of the patient.

Let me cite a case. On April 9, 1913, I was called to see a sick woman, living in the country. The woman, I found, had a temperature of 105° F., a pulse of 140, and complained of very severe pains all through the pelvis and of being unable to urinate. She told me of having been five months pregnant and that three days previous to my visit she had a Dr. M. commit a criminal abortion upon her with an "instrument that looked like a big auger." After telephoning for an anesthetist, I found that the "auger" had made three large lacerations in the cervix and two others in the vaginal wall that extended the full length of the latter. In the womb

there still remained a piece of placenta weighing about three ounces. I managed to save the patient's life, but I doubt very much whether she ever will enjoy the privilege of motherhood.

The point I want to make is this: I reported this case to the president of the county society, only to learn that our honorable president had "cold feet."

Another case. On May 21, 1913, I was called to see a woman living apart from her husband but nevertheless became pregnant, and again this Dr. M. had been on the job with his "big auger." In one respect he did this job a little better than the one just related, that is, there were no lacerations; still, the septic conditions I found were much worse, and for several days it looked as if my patient would "cash in." It got so that she would talk to the angels while the relatives were about the bed praying. She recovered —probably the therapeutic agents assisted the prayers.

This case I also reported to the president of our county society, who was also the county health officer. Result: The president and health officer called said Dr. M. to his office, showed him my written report containing names and dates, and then said: "M., you will have to cut it out, or Gebhardt will raise hell."

All of the above is a plain statement of fact, and not a knock on any medical society, for I am a member of that society and hope to remain one. Do not adopt the "holier than thou" attitude and try to make the public believe every doctor in the society is a saint, while every doctor out of it is a devil. For, that is not true. I know of some rascals that are members of our county society, while, on the other hand, one of the squarest, one of the most broadminded doctors I ever met is not a member. I hope that some day medical ethics will become a reality rather than a by-word and a joke.

A. A. Gebhardt.

St. Louis, Mo.

[To which "hope" we say "Amen!"—Ed.]

"MUDANG," OR "P'ANSU": A CORRECTION

Dr. Newton H. Bowman calls our attention to a slight error appearing on page 311 of the April number of Clinical Medicine, in his article on "Domestic Medicine in Korea." In the eighth line from the bottom of the first column the statement is made that the mudang or p'ansu are "men recognized by the ignorant heathen population as being the official mediators between evil spirits that cause disease and their victims." As a matter of fact, Doctor Bowman points out that these persons are not both of them men, but, rather, the former is a man, while the latter is a woman. The reader will, please, make the necessary correction in his April copy of the journal.

RESUSCITATION OF THE NEWBORN

I wish to remind L. J. Graves, of Leighton, Alabama, who, in your May issue (p. 447) gave his method of resuscitation of the newborn, of the saying that "there is no new thing under the sun." I have used the same method for more than twenty years; but, in addition, I place 1-100 grain of nitroglycerin dissolved in a half teaspoonful of water on the babe's tongue, and keep the pump on the hop —and the rosy cheek, quivering lip and the characteristic cry will soon follow. I use the nitroglycerin in cases of drowning, keep the pump on the move—and success is the reward.

C. C. Perry.

West Rutland, Vt.

INFECTED WOUNDS

In your May issue of Clinical Medicine, page 380, you ask, "What would be your treatment of such a condition?", the reference being to infected wounds. As for myself, I should cleanse this wound with dioxide of hydrogen solution and then apply specific echinacea in full strength; also give internally 20-drop doses of the same every two hours. Meanwhile subject to a course of calomel, followed by a laxative saline. I should expect such treatment to cure the patient.

John Freeman Neal.

Lytle, Tex.

HONOR FOR DOCTOR REGISTER

At a recent meeting of the Tri-State Medical Society of the Carolinas and Virginia, Dr. E. C. Register, who has been editor of the well-known *Charlotte Medical Journal* for twenty-five years, was elected president.

PITUITRIN IN OBSTETRICS

Called to see a sick woman, I found her in labor-pains, and, making the usual examination, I found everything moving along

nicely, with the water yet intact and a 2-inch dilatation of the cervix. I ruptured the membranes and found the child in L. O. A. position. There were light and irregular pains. I gave an ampule of pituitrin hypodermically. The baby soon was born and everything seemed to be normal. The cord was ligated and the baby turned over to the nurse. There were no intermission of pains at all.

I suspected something else; so, I again cleansed my hands and made another examination. There was another babe, breech presentation, the breech well advanced into the pelvis, with no chance for version. This babe also was quickly delivered, except that after coming of the head after a slight rotation of the head was made, birth was soon completed. To my surprise, it was a lifeless baby —apparently. The cord was ligated, and a basin of hot water was called for, as I always require this to be in readiness.

Now, of course, we all have our little hobbies that we partly gain by experience. Have the water at 70 degrees, and plenty of it, so as to cover the baby's body. Place the baby post down, then frequently change from post to ante position, making such changes as much as possible, to keep the head out of water, which gives the lungs a chance to expand and contract every one or two minutes. Draw the child's tongue forward. Remember to increase the temperature of water every two minutes, until as much as 130° or 140° F. is reached, if necessary. [This temperature seems very high.—Ed.]

Advantages of this method: (1) General stimulation. (2) Gravity. The tongue drops, glottis opens, giving a chance for air to enter the lungs on inspiration. Also, if any mucus is present along the respiratory tract (in the trachea and bronchi), some of it will readily come out.

I realize, to start with, that at this moment we have a change of circulation to deal with if from any cause the fetal circulation should be cut off some two or three minutes too soon. Then, of course, systemic circulation has no place.

Bodily functions are produced by vital force, heat produces stimulation, stimulation produces vital force. Of course, we may have exceptional cases, but, generally speaking, in all ordinary cases the infant usually reacts, when this method is carried out.

Do not get disheartened and quit work with the baby too soon, for sometimes the last two or three minutes' work with the babe means lots to the baby, and to the doctor as well.

A question: Did the physiological action of the pituitrin cause the lifeless condition of the second babe? Both babies live and are a normal pair, each weighing seven pounds.

C. P. Mitchell.

Byars, Okla.

LA ISLA DUVIDA: THE ISLE OF PINES

Possibly the "family" will be glad to hear a disinterested word about this corner of the world, officially known as the "Isle of Pines, or in its proper Spanish, La Isla de Pinas; but which sarcastically, but most incorrectly, the American colonists love to call No-Man's-Land, and which The Great Discoverer probably would "put on the map" as "Isla Duvida." For, be it known, Uncle Sam "got it" the same as he "got" Porto Rico, but left it to Cuba as the *de facto* government, "pending its ultimate disposition by treaty," and that's why the American settlers are so "unsettled."

Be that as it may, the Isle of Pines is in the Carribean Sea, 60 miles south of the south coast of Cuba and due south of Key West, and in the same latitude as Mexico City, Honolulu, French Indo China, and Assuan in Egypt. Also its north shore is 90 miles directly south of Havana. Hence, the island is well below the frost line, the winter temperature hardly falling below 50 degrees, and reaching that point rarely. It is about 40 miles by 60 miles in extension.

The soil is mostly very poor, being of a porous sand and coarse quartz gravel, and this is covered by a scant growth of coarse wire grass which has to be burned over every winter. The island derives its name from the fact of being completely covered by pine forests. The water is fair and in a few places there are springs called "magnesia" springs; also some carrying sulphur or iron. The coast is low and covered with mangrove swamps, there being only a few sandy beaches.

There are living at present about 3500 Americans on the Isle, and about 2000 Cubans (or Spaniards) and negroes. The American population fluctuates considerably. The chief enterprises of the settlers is grape-fruit, pine-apple, and vegetable growing. The natives raise cattle and hogs and burn charcoal. But fertilizing is necessary in vast amount, and this is very costly, so that fruticulture is a rich man's pastime only rather than a get-rich-quick for the impecunious amateur farmer from the states.

As a health resort, the Isle has a wonderful future, though recently there have occurred a

few cases of typhoid fever from a polluted water supply, but malaria and yellow-fever have never been known here. Rheumatism yields almost immediately to the climate alone, without treatment, and catarrh and all throat and bronchial troubles disappear as if by magic. Pellagra and hookworm disease are unknown, and the contagious diseases of childhood have not reached here yet. I do not know about skin diseases, except that personally I have been a life sufferer from psoriasis but after a brief stay here my skin has become as smooth as a babe's while my catarrh also is gone. Coughs and colds are little here, although consumption is taking off many natives.

However, the law of compensation holds good here as elsewhere. Men who have lived here a few years have very little "ginger" left in them, and they cannot work like they do in the States. The American women look unhealthy; they are about the color of Swiss cheese, and they are generally on the retired list (with the accent on the *tired*), and they are generally discontented (and not to blame). The children do not look good, either. They have no color and are soft and lifeless, as compared with children up north. The birth rate among Americans is very low; which is a blessing, considering the cost of living—which is much higher here than in the States.

Everything shipped in here must pay a duty to the Cuban government, and everything sent out must pay a duty to the United States: so, we get stung coming and going. If this were American territory (as, by rights, it should be), all would be well and the American settlers—who made this island worth while—could win out; but at present the outlook is not encouraging for us.

There are two licensed American doctors on the island, but one of them just now is away doing postgraduate work. I have met Dr. A. S. Draper, of Santa Barbara, who is the one holding the job down all alone. Doctor Draper is a Harvard man, and a fine fellow, but he wants to go away on a visit to the States. He tells me he is quite busy; nevertheless, he has a far-away eye on his old home up north. There certainly is an opening here for an all-around man, while the future is fairly good. Anyone interested may write to Doctor Draper, Santa Barbara, Isle of Pines, Cuba.[1] There are two or three native Cuban doctors, but several American women have left here and gone to the States for prospective confinement rather than be attended by a Cuban physician.

The people here are living in the hope that some day Uncle Sam will take this Island in out of the wet. At the close of the Spanish War the Isle was supposed to be American territory, the same as Porto Rico, and the land was bought up by Americans and thousands of our people came here with that understanding, only to find themselves off the earth, without schools or American laws. But with true American grit they have made the best of it: and the very flower of American manhood is represented here.

Among the drawbacks here the insect pests are quite bad, and some kinds are here the year around. There is no poisonous vegetation. There are quite a lot of snakes of large caliber (even boa constrictors in the "big" swamp), but they are not poisonous; still, they devour chickens and birds. Also along some of the rivers there are alligators not a few and do give people a scare. Of still greater interest is the fact that in the "cienega"—the large swamp to the south—there still abound specimens of that nearly extinct water mammal, the manatee, or grass-eating sea-cow. We have very little meat here, except tinned stuff; and no milk or butter, and no northern fruits, except in cans, and costing twice as much as in the States. Practically nothing will grow here unless it is heavily fertilized, and then only in the winter months of October to April.

Down on the south coast of the Isle there is a wonderful stretch of coral formation, with beaches and rocky bluff fronting the almost tideless Carribean. All the year round there is bathing and fishing, and the shores are strewn with a wonderful variety of conch-shells. There is fine drinking-water from the wells in the coral rocks, of which the lower third of the island consists. Back of it in a humus mold in "pockets" in the coral there is a vast growth of hardwood jungle, interspersed in spots with bananas, coconuts, and sweet potatoes planted by British settlers.

On the coast, there are hardly any insect-pests, but they are terrific inland. The sea is calm and warm, with very few storms; and there are wonderful marine gardens that surpass those of Catalina Island—and I have seen both. There the summers are like a northern spring and the days are cooled by frequent traveling showers and soft breezes from the sea. There is no winter—it is a land where it is always afternoon and *dolce far niente*. When your great northern

[1] Our correspondent forgot to mention (or was not aware) that a foreigner must pass a state examination in Spanish, at Havana, and at considerable cost—unless this has been changed of late at the behest of our State Department.—Ed.

world of civilization and wealth once learns of that spot, they will appropriate it for themselves; and its distance of only thirteen hundred miles from New York will be bridged by a fleet of luxurious boats.

A. J. Craig.

Los Indios, Isle of Pines.

AN AMERICAN DOCTOR STUDIES TYPHUS

An American doctor, Clarence D. Ussher, has received hearty and public thanks from the vali of the Turkish vilayet of Van for his "humane zeal and care for the sick" in the recent epidemic of typhus among the Turkish soldiers quartered in the city of Van. Doctor Ussher is in charge of the American Board's hospital in Van. He is a graduate of Kansas Medical College and has been in Turkey since 1898.

Van, the city, is the center of the Turkish province of the same name, away up in the northeastern corner of Asiatic Turkey. On its eastern border the vilayet joins Persia while on the north it is very near the Russian Caucasus. The city is on the shore of Lake Van, a large sheet of water whose surface is 5500 feet above tide level. The city is said to have been built by Semiramis and strange and interesting inscriptions and carvings are found in and about it.

Since the American Board began work there the mission has been through war, famine, pestilence and massacre and the epidemic of last winter will take its place in the history of calamities which Americans have helped the people to fight.

The Turkish military authorities were not insistent on cleanliness and sanitation and after the epidemic started it made rapid headway so that over 2500 soldiers are known to have died of the disease. Dr. Ussher was active wherever he was permitted to serve but had not access to the barracks or to the military hospital. In the Board's hospital, however, and in going about among the sick in the camp and in the city he made careful study of the disease and says:

"We have proved very conclusively in our hospital that the only means of infection is vermin. Our nurses have been thoroughly exposed to every form of contagion from the breath, desquamation, discharges, constant association day and night, and all this in an over-tired condition, and not one of them contracted the disease. The typhus patients have been put in the same ward with surgical, pneumonia, dysentery and even confinement cases, and not a single patient has become infected in the hospital. One of our nurses subjected himself to infected body lice, and promptly contracted the disease (incubation, I think, five days). I personally removed the lice from his body. We have become so sure of the mode of infection that, being compelled by the lack of bedding, we put patients with other trouble in the beds which had been occupied by typhus patients. We made no further change than clean sheets and pillow covers; and though in several cases the limit of incubation has passed twice over there has not been a single infection."

HARD WORK

Hard work is the hammer that pounds the nails
  Of certainty into success,
He who misses the nails is one who fails
  And works on the job less and less.

Long hits bring applause, but team-work wins
  The pennants for which we all strive;
Though some by their wits may seem to make hits,
  None but the hard workers survive.

There's many a man who has all through life
  A promising future ahead,
That never redeems the pawn of his dreams,
  Whose note is a promise that's dead.

The reason most men fall down by the way
  Is that they don't "try, try again."
'Tis surely a crime to waste all our time
  Resolving, not doing like men.

Do big things this year, determine to win,
  And let us all work with our might.
When we are inclined, we always can find
  The time to do anything right.

Big opportunities come to big men—
  My dear boy, remember that fact.
Then let us grow, so the whole world may know
  That when the time comes we will act.

The fellow who lands the orders is he
  Who knows how orders to obey;
And, if he will work and not try to shirk,
  You'll hear his report some fine day.

There's nothing succeeds like success, we are told;
  But drones cannot figure out how
A thing well begun is easily done—
  We don't live tomorrow, but *now*.

Homer Clark Bennett.

Lima, Ohio.

AN HONOR FOR DOCTOR LYDSTON

We are pleased to announce that at its last annual convocation the Hamilton College of Law conferred upon Dr. G. Frank Lydston the degree of Doctor of Civil Law. Our compliments to Doctor Lydston and our congratulations to the College, which honors itself as well as Doctor Lydston.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

I HAVE just finished reading a little book, "Hysteria," written by Dr. A. W. Thornton, and in it occurs the following significant passage:

"After a connection with the medical profession, over forty years, I can look back, and safely assert, that more than one-half the practice of physicians, with female patients, consists of cases of hysteria, and its mimic, and nothing else, doubtless taking some of its protean forms.

"It is not long ago that a patient of this class came under my observation, and inasmuch as in this class are embraced some of the crying evils of modern society I will describe it here somewhat at length.

"I was sent for in all haste to visit a lady who, I was told, was suffering *agonies* (it is always 'agonies,' 'tortures,' 'awful misery,' 'excruciating pains,' etc.) from pain in her chest or stomach—she did not know exactly where. (Again, it is always pain in some place where its absence cannot be detected, so that the physician is forced to rely upon the patient's statement—a bruised reed, truly, to trust to!) This pain, the woman informed me, had been so severe that she could not await my arrival (although I resided but a short distance from her home), but was compelled to take some medicine she had. This had been prescribed by a former medical attendant, but it had done her no good, she said; would I not give her something to afford relief right away?

"Up till now the woman seemed to be suffering intensely from continuous pain; but, as I began to inquire about her case and symptoms, she quickly launched into a long and elaborate description of her various troubles, totally forgetting, in the interest of the subject, her present suffering until the theme was exhausted. Then an immediate return of the pain took place as exaggerated as before. I told her I could not think of giving her any medicine so soon after her taking a dose of something, the component parts of which I was ignorant of; I admonished her to have patience and to give the medicine she had just taken a fair chance to operate; promised to call the next morning; then, I said, if she were not better, I would take her case in hand. Upon my arrival next morning, I found the woman in the same condition, and, since there was nothing serious the matter, I gave her a mere placebo—one of those medicines that are intended to satisfy the patient's mind without injuring the constitution, meanwhile affording a respite to obtain a full understanding of the condition.

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"It must be remembered that this lady had, by her own account (?), for two days and nights been suffering 'intolerable torture,' pain which, if real, naturally would have left her prostrated for a day or two more after so severe an attack. As a matter of fact, upon my calling next day I found she had joined a picnic party!

"When next I saw her, she told me that that was a peculiarity of her case (they all have some 'peculiarity,' something different from everybody else's—something more, or less, out of the common); that as soon as the attack of pain left her she was as well as ever and able to join any fun or excitement. I told her I knew it, that this generally was so with hysterical patients, that hysteria was all that was the matter with her, and it was of no consequence whatever. Then, when her husband asked what I thought of his wife's trouble, I told him plainly that there was nothing to be alarmed about, as it was only hysteria.

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"Perhaps some of my readers may think I did not feel very much sympathy for that patient—and I must acknowledge the fact. To explain the matter, however, I must enter a little more into detail, so that the reader may get at the 'inner consciousness' of it; and this I may do without any breach of confidence, as no names are given and she has died of measles since then. This lady was of a peculiarly bright and lively disposition; she had a tendency to torpidity of the liver; had five or six neglected children; and she had

become so demoralized by the troubles connected with the proper performance of a mother's duties that she and her husband had determined to have no more additions to the family and had systematically adopted some of those abominable modern practices for that purpose, and the knowledge of this fact had disgusted me with her."

Doctor Thornton, in the book cited at the start, cites a number of cases of hysteria that are extremely interesting. I will give them herewith:

"*Lethargy.*—A few years ago, the village of Thenelles, in the department of Aisne, was excited over a young girl who had been in an unbroken slumber for four years! The fame of this case spread abroad, till the report at last reached Paris, and some of the doctors determined to investigate it. In their published account, they told how they tried to cure the case, notwithstanding the opposition of the mother, and even appealed to the authorities to interfere. The lethargic subject was then twenty-five years of age, and presented considerable emaciation of her lower limbs. Her sleep had never been interrupted. The eyelids closed, and when opened showed her eyes convulsively turned upwards, and blowing upon them did not cause any reflex action of the lids. Her jaws were tightly locked, and some of her teeth had been broken off in efforts to open her mouth. The muscles contracted at the least breath or touch, and the uplifted arms retained the position they were given. The subject, a very nervous, irritable girl, suddenly had fallen into this state after intense fright. She was noruished by liquid food, poured into her mouth.

"*A Typical case.*—The Countess de W., in Paris, accused her maid of having attempted to poison her, and the case became a *cause celebre* in the Parisian law courts. Crowds of women, of the upper classes and aristocracy, crowded the courts sympathizing with the dear countess. After a sensational trial, the court of justice, acting under a false impression, condemned the unhappy maid to death.

"However, the judgment was quashed, and a new trial was held, when fresh evidence was brought which fully established the innocence of the accused maid, and that unhappy creature, already once condemned to the scaffold, was acquitted by an unanimous verdict of the jury. But what of the dear countess? It was fully proved, that she was her own tormentor—having bound herself up in bed, and herself poured out the poison, which was still to be seen blacking her face and breast. Yet, for the sake of gratifying a morbid desire for notoriety and sympathy, she had no hesitation in having an innocent girl condemned to the scaffold, and carried out her false accusation and persisted in her perjury with such cleverness as to deceive both judge, lawyers, and jury, being utterly regardless of truth, honor, or honesty.

"She afforded an example of that mental condition which has been the cause of numberless false charges, made and sustained against innocent men, of the same character as that of Potiphar's wife of old against Joseph. So notorious has this characteristic of hysterical women become that lawyers of experience are very shy of giving full credence to the statements of their female clients. I doubt not, that many such charges could be quashed by satisfying the courts and juries that the women making them are subjects of hysteria, and only demonstrating some of the well-known vagaries of that disease.

"*Hiccough.*—Doctor Baillie has described the case of a girl, age 15, of sanguinous temperament, who suffered from this affection in a remarkable manner. The disease seemed to have been caused, first, by great excitement at a party at which she had been present, where she attracted considerable attention and drank freely, and second, by a severe scolding which she received from her mother soon after. The attack began with the usual hysteric fits of great strength and frequency, and which attained a periodical tendency and were treated with quinine.

"This symptom was followed by hiccough, which at first was so gradual that it did not excite any alarm, until it became a prominent symptom of the disease and resisted every attempt to subdue it, although ether and laudanum were exhibited in doses so large as to require remedies to counteract their poisonous effects. The influence of a violent fright was next tried with but partial success, and the hiccough returned in a few days.

"When the patient was first seen by Doctor Baillie, the hiccough had existed fourteen months, and for the last seven had ceased only during sleep. It was so loud that it would be heard a distance of two hundred yards in open air, and was much quicker than ordinary hiccough. Also, on going to bed at 9 p. m. she invariably had a peculiar hysteric attack which began with loss of sensation and motion, and was soon followed by a

convulsive effort of the respiratory muscles in which all the muscles of the back seemed to sympathize. The fit was generally succeeded by hiccough, which gradually gave way to sleep. After a time some improvement was apparent, and she was sent to the country and the case lost sight of."

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There are many complaints peculiar to women incidental to the period from 14 to 21 years of age. Under existing social arrangements, puberty is, in man, often attended by moral delinquency, but rarely by bodily inflictions. In woman, however, the reverse is true, for, while retaining her moral health, as a rule, she is subject to numerous bodily infirmities, which may generally be prevented and always relieved. The knowledge of "what ought to be" will prevent a woman from being satisfied with "what is," and will lead her, when suffering, to consider whether the ill health may not be caused by the wrong performance of some particular function, and whether medical advice is not required to place her constitution on a sounder basis.

The sex-function to be healthily performed, should fulfil the following conditions:

1. It should be uninterrupted, otherwise chlorosis may occur.
2. The function should be performed neither more nor less frequently than once a month.
3. The pain attending it should not be too violent nor of too long a duration.
4. The flow should not be excessive nor of too long continuance.
5. The monthly flow should never be suddenly suppressed.
6. The menses must not be accompanied by too much mucous discharge or "whites."
7. The monthly function should not be attended by marked nervous symptoms.

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The most frequent nervous symptom at this period is a peculiar cerebral symptom, not actual pain, sick headache, or hysteria, but *pseudonarcotism*, which is a dull, heavy, stupid feeling, with a great tendency to sleep. It is seen in the greatest intensity previous to puberty, and at the change of life, and in the vigor of womanhood, as a consequence of sudden suppression of the menstrual flow. It varies from a slight heaviness to variable shades of intensity, which prompt women at different periods of life to complain of "dimness of vision," or of "a heaviness in the head," "a stupid feeling," "a feeling heavy for sleep but without pain," "of feeling lost and bewildered," "of the fear of going mad," and so on.

When the nervous system has been debilitated by want of exercise or food, by overtaxing the mental powers, and the like, it can no longer bear the reaction of the puberic crisis, and the undue accumulation of nervous power in the brain may vent itself in various ways. The same results will be still more likely to occur, if a bad system of physical education has induced permanent derangement of the monthly function. Thus a continued nervous hysterical irritability may be engendered, modifying all the complaints to which women may be liable, imitating most of them, and often baffling the sagacity of the most able physicians.

This nervous irritability will for a time accumulate like poison, rendering a young person low-spirited and melancholy, or it may produce a foolish kind of bashfulness. But this state cannot last very long; a point of saturation being reached, a reaction comes on, and the patient now becomes either "giddy from constitutional joy, and fuddled with animal spirits," or successive convulsive attacks consume this accumulated nervous poison, relieving her for a time, but leaving her exhausted and predisposed to a return of similar attacks.

Hysteria is not only shown by continued lowness of spirits, and other symptoms I have described, but also by strange pains. These pains may exist without any immediate connection with hysterical attacks. They seem to be the exaggeration of the pains in the head, the spine, and the limbs, which are so frequently observed during the monthly flow, and in uterine affections.

When these hysterical pains persist for any length of time in the spine, or in the vicinity of the hip-joint, they naturally suggest that they may be caused by some serious disease of the bones; and then it frequently occurs that girls are for years confined to the bed, while exercise, amusements, change of air and scene might cure them in a few months.

I have noticed that many nervous affections are "catching"; that as the vibration of one chord causes similar chords, attuned to the same note, and within a given sphere, to vibrate to the same tone; so the mysterious vibrations of the nervous system of one girl may cause that of another to vibrate in the same hysterical way. Sisters, therefore, particularly if younger, should not be allowed to witness such attacks; and in school the sufferer should be placed in a room without any youthful companions.

Among the Books

NASCHER: "GERIATRICS"

Geriatrics. The Diseases of Old Age, and Their Treatment. By I. L. Nascher, M. D. With an Introduction by A. Jacobi, M. D., and 81 Illustrations and 50 Plates. Philadelphia: P. Blakiston's Son & Co. 1914. Price $5.00.

In another review we have pointed out the significance of the differences which pertain to the nature and course of disease in children as compared with adults. Equally important and significant are the differences which characterize the pathologic processes of old age; constituting a branch of medicine almost, if not quite, as distinctive as that of pediatrics, and to which of late the term geriatrics has been applied. As the developmental factor, in all of its ramifications, profoundly modifies the pathologic processes of infancy and childhood, so must we consider that the degenerative or subinvolutional factor influences just as profoundly the pathologic processes of old age, and calls for a distinctive diagnostique and therapeutics.

It is to the task of separating out these diagnostic and therapeutic elements of geriatrics that Doctor Nascher has been addressing himself during the past ten years or more; and his book, now under consideration, contains the winnowed results of his task. No such work has appeared in this country since Charcot and Loomis' "Diseases of Old Age" was published in 1881, and that was partly a translation from lectures of the French physician; so that Doctor Nascher's book really is the first American book upon the subject.

And it is a masterly work, such as we cannot hope to review adequately in the limited space at command. It must be seen and read to be appreciated, and we highly recommend our readers to procure and study it. Not least among its good points is its earnest advocacy of alkaloidal therapy in the treatment of old people—a most rational clinical principle; for, if there be any physiologic conditions under which the exact dosage and accurate markmanship of the alkaloids is of special value, they are to be found in the unstable periods of childhood and old age. The preface to the book is most appropriately written by Dr. Abraham Jacobi, the distinguished pediatrist.

KELLEY: "SURGICAL DISEASES OF CHILDREN"

Surgical Diseases of Children. A Modern Treatise on Pediatric Surgery. By Samuel W. Kelley, M. D., LL. D., honorary professor of surgical diseases of children in the Medical Department of the National University of St. Louis. Illustrated. Second edition, revised and enlarged. New York: E. B. Treat & Co. 1914. Price $5.00.

We are not in the habit of regarding pediatrics as anything like so distinct and definite a specialty of medicine as, let us say, gynecology or nose- and throat-work. Indeed, specialties which confine themselves to this and that part of the body or to this and that organ and function are multiplying with each passing year, while the specialty of pediatrics seems to be just as rapidly declining, or else becoming swallowed up in other specialties encroaching upon and overlapping it. Yet, there are excellent reasons for the assertion that, of all the branches of medicine to which can possibly be ascribed the dignity and status of a specialty, pediatrics is the most distinctive and the most entitled to such a separation.

The factors of inheritance, developmental pathology, excessive reaction to stimuli, and others that readily will occur to the thoughtful student serve to engender a group of diseases in children to which the adult is a stranger, and also powerfully to modify those diseases which they share in common with adults. Of all these factors, that of development is undoubtedly the most significant. The fact that the child is *unfinished*, is still growing, exerts a profound influence in shaping its pathology, as it does in shaping its physiology.

In internal medicine, to be sure, these considerations have received a certain degree of recognition, although, in our opinion, not nearly enough. But in surgery, where one would think that they ought to have even more weight, they have been strangely ig-

nored and neglected. We are not speaking so much of what technically is called orthopedic surgery, as of surgery in general. Doctor Kelley stands almost alone, so far as the literature of this country is concerned, in his demonstration of the deep-lying differences which distinguish and separate the surgical diseases of children from those of adults, and in his clinical application of these differences.

We have no hesitation in declaring that Doctor Kelley's book is a great work, not alone in its actual content, but in the broad viewpoint in which it sets the whole subject of which it treats. Clinically, it is as complete as care and judgment could make it. Scientifically, it is almost epochal. The present edition contains a great deal of new matter; not, as the author says, everything new that has been proposed, but such as is likely to have permanent interest and value. We trust it will meet with the reception and adoption that it deserves.

GORDON: "NERVOUS DISEASES"

Diseases of the Nervous System. For the Student and General Practitioner. By Alfred Gordon, A. M., M. D. Second edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1913. Price $4.00.

Neurology is not making any great advance on its own legs. Whatever progress has taken place in the last few years must be credited to the carrying power of the pathologist and the physiologic chemist. Or, to change the figure rather abruptly, the penetrating and illuminating light which the pathologist and the physiologic chemist have lately been flooding through their own sections of internal medicine naturally has overflowed into neurology and shed some suggestive light (to say the least of it) upon many of its obscure problems.

It is not surprising, therefore, to find that most of the advancement represented in this new edition of Doctor Gordon's book on nervous diseases is of this indirect character, relating to pathological findings in the cerebrospinal fluid, the Wassermann reaction, and the like. The only feature of progress belonging legitimately to neurology itself is Freud's principle of psychoanalysis, of the net value of which, to be sure, we believe there can be no question, but whose practical working-details are still the subject of great confusion and vigorous disputation. These elements of change in the neurological situation are set forth in Doctor Gordon's revision with the same discrimination and regard for practical values that he observed in his former editions. He has had principally in view the general practitioner. Treatment has received special attention, in accordance with the new data accumulated, such as the various sera, salvarsan, surgical procedures, and such like.

LAGARDE: "GUNSHOT INJURIES"

Gunshot Injuries: How They Are Inflicted, Their Complications and Treatment. By Col. Louis A. Lagarde, U. S. Army Medical Corps (retired). New York: William Wood & Co. 1914. Price $4.00.

A month or two ago we had occasion to notice a book, written by an English military surgeon, dealing mainly with the effects of injuries from small-caliber bullets, and embodying the results of his experience and observations in the South African war. In Colonel Lagarde's book, now, we have a treatment of the same subject by an American, from the American standpoint, and based upon the author's personal experiences in the Spanish-American war and his observations as a foreign military attaché in the South African and, later, the Russo-Japanese wars.

Like the English book, the present work has a very varied interest. Technically, historically, and economically it is extremely instructive. It differs somewhat, however, from its British contemporary, in that it gives considerably more attention to the clinical aspects of the subject; hence, it is of more interest and service to the general practitioner, who, although he may never serve on a battlefield, is quite likely to encounter cases of gunshot injury in his civil practice, and will know how to value the opinion and instruction of one who has had such wide experience in this class of work. Colonel Lagarde's book is published under the direction of the Surgeon-General of the Army and by authority of the Secretary of War, and therefore bears somewhat of an official endorsement.

CUNNINGHAM: "ANATOMY"

Cunningham's Textbook of Anatomy. Edited by Arthur Robinson, M. D., F. R. C. S., professor of anatomy at the University of Edinburg. Fourth edition, enlarged and rewritten. New York: Wm. Wood & Co. 1913. Price, cloth, $6.50; half morocco, $7.50.

Cunningham's "Anatomy" has, in the last ten years, largely replaced the more volumi-

nous and exhaustive Gray as a teaching textbook in the medical schools of this country and England. It has found special favor in the United States, where it has been even more widely adopted than in its own native land. Gray remains, of course, the classical textbook of descriptive anatomy; but Cunningham adapts itself, in our opinion, much more readily to the practical needs of the dissecting-room and the anatomical laboratory than does Gray.

The present, fourth, edition has a peculiar interest attaching to it—a sad and human interest—in that during the interim between the last and the present revision Doctor Cunningham has passed away. Two other collaborators also have recently died, namely, Doctors Birmingham and Young. The death of these authors has necessitated changes in the authorship of several of the sections. The original plan and style of the book, however, has been retained, and the new edition represents all the most recent advances in our knowledge of anatomy and its physiologic significance.

BALLENGER: "GENITOURINARY DISEASES AND SYPHILIS"

Genitourinary Diseases and Syphilis. By Edgar G. Ballenger, M. D., professor of genitourinary diseases at the Atlanta Medical College. Second edition, revised. With 109 illustrations and 5 colored plates. Atlanta: E. W. Allen & Co. Price $5.00.

Three important innovations have almost revolutionized the clinical aspects of genitourinary diseases and of syphilis in the past few years, namely, vaccine therapy, pyelography, and salvarsan. Indeed, one may say, without much exaggeration, that, in the light of these discoveries, the clinical biography of these diseases has had to be rewritten. Certainly, all the textbooks on the subject have had to undergo complete revision; so much so as almost to amount to rewriting. Thanks to these innovations, this branch of medicine and surgery—which for years was obscured in a chaotic confusion that more than any other department caused it to lend itself most readily to charlatinism and deception—has now emerged into the light and order of something like an exact science.

This change in the state of affairs is, of course, the basis of the revision of Doctor Ballenger's treatise. The only serious criticism we have to make is that it was so long delayed. Doubtless, however, the author was waiting to see definitely whither the trend of the new era would lead. His revised edition embodies all this modern advancement in diagnosis and therapy, in the same comprehensive, well-digested fashion that characterized the first edition. Special attention is devoted to the more common diseases and procedures, with brief mention of the rarer ones. Dr. J. Edgar Paulin has written the section on the Wassermann and luetin tests.

BAILEY: "HISTOLOGY"

A Textbook of Histology. By Frederick R. Bailey, A. M., M. D. Fourth edition revised. Profusely illustrated. New York: Wm. Wood & Co. 1913. Price $3.50.

Reviewing Bailey's "Histology" is becoming about as much a work of supererogation as it is to review Gray's "Anatomy" or Webster's Dictionary. We doubt very much whether there is a school or college in the country, where the biological sciences are taught for any purpose, that does not make use of this classical textbook. And a glance through the present edition moves us to extend this statement into the future and to predict that teachers of histology and biology will continue to select Bailey's as their working-manual.

There does not seem to be anything in the way of advance or innovation in the subject which has not received its proper evaluation and representation in the author's revision. Especial mention, though, may, perhaps, be made of the careful and painstaking work of Dr. Oliver S. Strong, who wrote for the third edition the chapter on the nervous system, and who has thoroughly revised it in the present one. The book remains in a class by itself; it continues, in fact, to be a classic.

LEONARD ROGERS: "DYSENTERIES"

Dysenteries: Their Differentiation and Treatment. By Leonard Rogers, M. D., B. S., F. R. C. S., of the Medical College and Hospital, Calcutta. London: Henry Frowde, Oxford University Press. 1913. Price $3.75.

This is one of the subjects in medicine in which very notable work has been done and equally notable progress made within the last few years, for a large proportion of which the author of this book himself has been responsible. Two results of this work and progress stand out conspicuously: namely, the intelligent differentiation, both scientific and clinical, of the different forms of dysentery,

and the demonstration of the value of emetine in the amebic form.

Leonard Rogers was, in fact, the first of the great tropical clinicians to establish, by long and careful experimentation, the specific curative influence of the alkaloid emetine in amebic dysentery, his findings being published in *The British Medical Journal*, in 1912. (We may be pardoned for reminding our readers that CLINICAL MEDICINE had been recommending it for many years previous to that.) The book under review is, in reality, a presentation, in more orderly and permanent form, of those same findings.

A case of abscess of the liver. From Roger's "Dysenteries"

The treatise may be divided into two sections: first, that which deals with the differentiation of dysenteries, and, second, that which deals with the clinical use of emetine in the amebic variety. A short chapter at the end is devoted to other forms of dysentery. We cannot forego this opportunity of congratulating ourselves that our position in this matter has received such unqualified confirmation from so high a quarter.

LYDSTON: "SEX HYGIENE FOR THE MALE"

Sex Hygiene for the Male: What to Say to the Boy. By G. Frank Lydston, M. D. Illustrated with 24 engravings. Chicago: The Riverton Press. 1912. Price $2.25.

With his characteristically vigorous and trenchant pen and his brusque, outspoken fashion of calling a spade a spade, Dr. G. Frank Lydston has given us a very manly and straightforward book on this rather difficult subject. But, with his customary good sense, he has avoided both extremes into which writers on this topic almost always fall. He displays neither the offensive vulgarity nor the namby-pamby niceness that characterizes most of the books on sex-questions, but presents in plain, manly language the common sense of science and experience, so that he who runs may read.

This is just the kind of stuff that an earnest, fearless man would talk, even to a mixed audience, without the slightest danger of giving offense, while at the same time sending everybody away feeling that he had had the truth driven home. Amid the mass of sickening wish-wash that it has been our misfortune to have thrust upon us of late on this subject, this book of Lydston's is like a wholesome, refreshing breath of clean, cold air.

We have many inquiries for books of this character, and we are glad that at last we have one which we can endorse without hesitation.

RIVIERE: EARLY DIAGNOSIS OF TUBERCLE

The Early Diagnosis of Tubercle. By Claude Riviere, M. D., F. R. C. P., of the City of London Hospital for Diseases of the Chest. London: Henry Frowde. Oxford University Press. 1914. Price $2.00.

Whatever may be the confliction of opinion as to the precise value of this and that therapeutic measure for the treatment of tuberculosis, upon one point, at least, there is a perfect unanimity of agreement on the subject, namely, that everything depends upon early recognition of the disease. Of all the factors that count, time is paramount. So that, in reality, diagnosis remains the prime element in successful treatment. In this matter of diagnosis, as the author wisely says, misguided enthusiasm has misled many as to the actual value of some of the tests, and the position they should occupy. We thoroughly agree with him that, valuable as they undoubtedly are, the newer tests in no way enable us to dispense with the older methods. They can only corroborate physical diagnosis. This is the motif and burden of Doctor Riviere's book. It is a rational and well-balanced summary of the present status of tubercle diagnosis, in which values and proportions are observed with rare discrimination.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6020.—"Complete Exfoliation of the Bladder." A correspondent presents the following history of a case and asks for criticism or comment.

The patient a woman, aged 26, of good constitution, with good family history. She was confined December 4, 1913. It was a forceps delivery, on account of a too narrow pelvis. The child was well developed and fully matured, but, on account of its large shoulders delaying delivery of the body, was born dead. The patient was nursed for seven days after confinement by her mother and her mother-in-law. At my daily call they reported the patient as "doing nicely," except that she could not control her urine; which, though, was not thought to be unusual, because of the traumatism to the vaginal orifice, there being a second-degree laceration of the perineum and the floor of the vagina, repaired at the time of delivery. The sutures, however, did not hold and sloughed off in the vaginal discharge that continued to flow throughout the patient's illness. At times there would be a small amount of this discharge, and at these times it was thickish and of a cloudy color, and had a very offensive odor; while at other times there would be a continuous flow of thin clear liquid with less odor.

"On December 12, the patient became restless, and another physician was called in consultation. It was then decided that the bladder was the seat of the trouble, and it was discovered that there was retention of urine. Upon catheterizing, 2 quarts of bloody, ammoniacal urine was drawn off; but, for fear of shock, no more was drawn off at this time. The patient was not relieved, so, about one quart more of the same kind of urine was drawn two hours later and then the bladder irrigated with a 2-percent solution of boric acid, a small amount of which being allowed to remain at the conclusion.

"A trained nurse now was put in charge. By her, the bladder was catheterized every few hours, and then irrigated with a solution of boric acid; and after a few days the urine cleared up and the patient began to feel better. The consultant came over several times, while a daily report was mailed him. As the patient was now in good spirits, and, having more use of her body, the soreness leaving, also the swelling (after hot local applications), it was decided that she was much improved.

"Until this time her temperature had been ranging from 100° to 102° F.; it remained at 102 degrees for four and one-half hours. After a few days the temperature gradually subsided and was inclined to be subnormal. All indications were considered favorable, with the exception of a look of distress and a restless condition that could not be accounted for. On January 8, I called and found the patient feeling good and joining in the conversation and laughing at various jokes; said she would try to sit up some that evening—and she did so for a few minutes.

"However, when I called the next day I found the patient in a bad condition and with all symptoms exaggerated, that is, the pain and restlessness were worse, while the signs of distress on the face were noticeable to all; moreover, she was only halfway rational. On the evening of the following day, the 10th, while I was catheterizing the bladder, the flow of urine became obstructed. I discovered that a membranous substance protruded from the urethra, and, when this was removed, another, much larger, piece of the same kind immediately appeared in the urethra.

The consulting doctor, being in the locality at the time, was called in, and he was present when this last piece of tissue came from the bladder. At his request, I put the tissue in a solution of formaldehyde and sent

it to a reliable biologic laboratory. The report received was as follows:

" 'I looked the sections of tissue over yesterday and find that the major part of the tissue contains muscle-fiber, such as is found in the bladder; the mucous membrane is entirely destroyed, and the infiltration is so extensive that practically no structure except the necrotic cells can be made out.' This, as you see, confirms our opinion at the time, that the bladder was completely exfoliated. I have inquired into this condition and find that it is exceedingly rare. Many of our obstetricians with large practices have never seen a case. The explanation of those cases that have been observed is that it comes after a virulent infection, by which a toxin is developed which destroys the mucous membrane and the muscular coats of the bladder. There are always predisposing causes, such as an enormous distention or the presence of some large irritant.

"A puzzling question in the case was, where did this vaginal discharge come from? On the evening of the 9th, a thorough examination of the vagina and uterus was made by the consultant and myself, and we were unable to find the source of the discharge. At the time, the discharge had a urinary odor and the idea was expressed that possibly it was from the decomposing urine which trickled constantly into the vagina. The urine was loaded with albumin and pus. Examination of the urine before confinement revealed no pathological condition whatever. The patient was in a semicomatose state from January 9 till death, which occurred on the 12th.

"This case was particularly interesting to me, as I never had heard of such a condition; and it so happened that I was fortunate in having in consultation the physicians I did have, one of them being one of the best surgeons in St. Louis, and the other a general practitioner who stands among the highest in his community. The source of the infection was never determined and today remains a mystery, as all antiseptic precautions were used in the case."

As you say, cases like this one, are rarely observed in these days, but there can be no question that you were dealing with a vesicovaginal or a cervical fistula and the naturally following subsequent suppurative cystitis. In this form of cystitis, there is infiltrating inflammation (interstitial), with much pus in the urine, large and small epithelia, leukocytosis, and red blood-cells. The fibrinous bodies rapidly become increased if the urine is allowed to remain strongly ammoniacal. Ultimately, the mucous membrane of the whole bladder is destroyed and cast off; occasionally (especially in a case of this kind) broken up in pieces. Not infrequently fragments block the urethral outlet and require extraction at the hands of the surgeon. A number of such occurrences are on record.

A thorough examination of the parturient tract subsequent to delivery (especially as the perineal and vaginal floor were injured) would, unquestionably, have revealed the tear in the vesicovaginal or vesicocervical septum.

It is possible that the wound may have been caused by the forceps. On the other hand, prolonged pressure of the head on the pelvis, setting up pressure-necrosis, may have been responsible. All sorts of complications may occur, fistulas being cervicovesical, uterovesical or utero-cervico-vesico-vaginal. Where there has been severe pressure or tears of the parturient tract exist, the bladder should be catheterized for several days after the delivery; also, perforation must be excluded. Even the possibility of breaking down of some necrotic area must be remembered. The bladder should be emptied at least every four hours, and hexemethylenamine in 5-grain doses be administered at equal intervals.

This is a most unfortunate case, and it is possible, considering the maintained comparatively good condition of the patient, that her life might have been saved even when exfoliation of the vesical mucosa was occurring. The presence of a surgeon rendered operation possible.

Bacterins, too, would have been of material value. It is regrettable that a postmortem examination was not held and the exact site and character of the primary lesion ascertained.

In response to our private letter to our correspondent, the latter writes:

"I wish to thank you very much for your comments on this case. As you say, this was a most unfortunate case in more ways than one. I have felt that the outcome would have been decidedly different had I not put too much trust in the two apparently intelligent women who had the care of the patient after confinement. I have waited on hundreds of confinements in the eighteen years of my practice and this was the first case where such trouble occurred to this extent. Of course, retention of urine is common in primiparas, but in this case it slipped upon me wholly unexpected, on account of the fact that I considered the nurses in charge

capable of caring for the patient. Still, as sometimes happens, I was deceived.

The question of a fistula was considered in the consultations held, and thorough examinations were made at different times to determine if such were the case; but nothing of the kind could be found. We later decided it to be a case of cystitis, due to the distention from the retained urine. The consultants did not think that the wound in the bladder, if such were the case, could have been caused by the forceps, but from the pressure-necrosis. The medical treatment was as thorough as could be suggested and urotropin and other urinary antiseptics were administered to the fullest extent. When the surgeon was present the condition of the patient would not admit of an operation, let alone the trip to the hospital.

"As for an autopsy, the consultants could not be secured to hold a postmortem examination, as they lived in other towns, while I did not feel justified in attempting it alone. I certainly do wish that it could have been done.

"The doctors called in to see the patient pronounced it one of extreme rarity and something they had never seen, and they were men of experience. Another thing to take into consideration is the fact that in this country not one woman in fifty is ever seen by the attending physician after confinement, and it is so seldom that any complications occur that these are the exception rather than the rule. However, such a case as this gets a fellow to looking out for trouble in every case after that. I do not believe that such as this can ever come up in my practice again, for it has put me on my guard."

We fully comprehend the difficulties you had to contend with, doctor, and also realize how commonly women in isolated districts are left without medical supervision after childbirth.

As you evidently recognize, thorough examination of the patient twenty-four to forty-eight hours after delivery would have revealed any lesions and led to the institution of appropriate treatment. Under such circumstances, it is more than probable that the woman would be alive today. But, as you cogently remark, a case of this kind will cause the practician to watch out for possible trouble in every case.

QUERY 6021.—"A Theory About Radium." B. A. R., Virginia, writes as follows: "It does not coincide with accepted ideas of matter and force to think of a small particle of radium emitting energy sufficient to produce a burn on the human body and continuing to do so for years and years without losing any of its weight or power. Then, why not consider it as not having any force *per se*, but as a transformer of force somewhat as the reflector in a Crooks' tube produces x-rays, or as a reflector of force as a mirror reflects the sun's rays? We know that there are ever passing electric forces to and from the north pole. Then, why not look upon radium as a substance having the peculiar property of transforming that force into a ray similar to the Roentgen ray?"

We fear, doctor, that your theory will not "do." Scientific men, particularly the Germans, have done an enormous amount of work with radium and other radioactive substances. They have classified its rays, ascertained what they consist of, measured them, even weighed the molecule of radium before and after the transmission of rays, and pretty nearly settled the character, if not the nature, of the whole "animal."

For instance, it may interest you to learn that the alpha rays given off in radium emanations have been shown to be identical with the thorium atoms, and that its atomic weight is known to a decimal point. We thank you, however, for submitting your interesting suggestion. Some of these days we are going to present in CLINICAL MEDICINE a review of recent work with radium; possibly we may get it into our next issue.

QUERY 6022.—"Emetic Dose of Apomorphine." F. J. M., Kansas, wishes to know: (1) Whether he may expect vomiting from the internal administration of 6-64 of a grain of apomorphine or of fourteen emetine granules of 1-64 grain each. (2) Whether an aqueous solution of capsicin will produce "puking" as surely as tincture of capsicum. (3) Whether the vegetable alkaloids lose strength when put up in pill or granule form? Our correspondent informs us that he is asking these same questions of some other authorities and that upon these various answers will depend a possible "right about face."

It would not be possible to cause emesis with 6-64 of a grain of apomorphine administered by mouth. Bear in mind, doctor, that comparatively large doses of this drug may be given internally without causing nausea even. In order to secure prompt emesis, administer 1-10 of a grain of apomorphine hypodermically. On page 25 of "Alkaloidal Therapeutics," you will find this statement:

"If given by the mouth, apomorphine does not even cause nausea, but powerfully stimulates the secretions of the respiratory mucous membrane."

The dosage recommended is: as an *expectorant*, "one or two granules (gr. 1-64 each) every half to one hour, to effect; as an *emetic*, 1-20 to 1-10 grain hypodermically."

The smaller dose is intended for young children or very delicate women. Solutions as well as (rarely) granules and tablets sometimes turn green on exposure to the air; however, the efficacy of the drug is in no way affected thereby. Such change in color (in solutions) may readily be prevented by the addition of a drop of greatly diluted hydrochloric acid.

You ask whether vomiting should not follow the administration of fourteen emetine granules (1-64 grain). If you are speaking of the pure *emetine* hydrochloride (gr. 1-64), you must bear in mind that this alkaloid is the distinctly expectorant principle of ipecac. As much as 1 full grain has been given without producing emesis. On the other hand, *emetoid* contains both cephaeline and emetine, the former (cephaeline) being the emetic principle. Granules of cephaeline hydrochloride, of 1-24 grain each, are on the market. One or two of these granules every five to ten minutes is the average dose. As soon as vomiting begins, copious draughts of lukewarm water should be drank.

Of course, in large doses emetoid will ultimately produce emesis, but where it is desirable to empty the stomach quickly apomorphine hydrochloride should be the agent of choice.

Now as to the vegetable alkaloids. They do not deteriorate when properly prepared in pill or granule form, provided, of course, that these are kept in closed containers and not exposed to intense heat or moisture.

Concerning your second question: We are not aware that any safe dose of tincture of capsicum will produce emesis. Solutions of capsicin most certainly never should be given for that purpose. Conversely, capsicum or its oleoresin may be administered to relieve the vomiting and retching of alcoholics, very minute doses sufficing for that purpose. Really, are you not confusing mustard and red pepper—the latter an old-fashioned emetic in emergencies?

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QUERY 6023.—"Removal of the Middle Turbinals." C. O. R., Washington, has a woman patient who suffers severely from headache, besides pain and tenderness over the frontal sinus; also, her nose is "stopped up," so that she is constantly feeling very uncomfortable. I find her turbinals are swollen, especially the middle ones on both sides, and pressing on the septum; and even after they are shrunken by cocaine they leave very little room for the passage of air. The patient, who is about thirty years of age, seems to be in good health. Our correspondent does "some nose- and throat-work, more so than the average practitioner;" still, he is in doubt as to what to do in this particular case. He also desires us to recommend a good work on the nose and throat, "one which will tell the general practitioner just what to do and how to do it."

The very meagre data supplied are not sufficient, we must say, to permit us to offer any definite advice; it would seem, though, that removal of a portion or all of the middle turbinals is indicated in the case of this woman. We need not tell you, of course, that removal of the middle turbinal has no ill effect upon the filtering function of the nose; while, on the other hand, the inferior turbinals never should be removed entirely.

As to procedure, submucous resection is given preference by the majority of modern operators; and by this method nasal obstructions may be corrected but the physiologically important tracts of mucosa preserved.

Amputation of the anterior end of the middle turbinal is a comparatively simple operation, and is described in detail in Thomson's "Diseases of the Nose and Throat" (Appletons, 1912. Price $7.50). We do not believe you can procure a more practical and satisfactory work.

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QUERY 6024.—"Ptyalism of Pregnancy." J. F. H., Arkansas, asks: "What would you advise for ptyalism in pregnancy—atropine seems to control the condition, but the patient complains of an excessively dry throat, and she cannot tolerate the drug. She first had pernicious vomiting with the ptyalism, but painting the os uteri with silver nitrate controlled that at once."

Unfortunately, ptyalism of pregnancy does not yield readily to treatment. Atropine, 1-500 grain half-hourly or hourly for two or three doses, then a smaller quantity every three hours, undoubtedly will prove most effective. Hyoscine hydrobromide and hyoscyamine also are useful and may be administered hypodermically.

This writer has had excellent results also from calx iodata; that is, first securing an impression with atropine, and then adminis-

tering the calx iodata three times daily. Begin with 2 grains and gradually reduce to 1-3 of a grain.

As perhaps you are aware, excellent results are said to follow the administration of potassium bromide. We believe, though, that strontium bromide is even more efficacious.

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QUERY 6025.—"Wanted: A Harmless Hair Bleach." J. H., California, wants to know of a harmless preparation that will render the hair of a brunette a clean white color. A lady patient of his admires white hair so much that she would not hesitate to apply such a preparation to her hair (although young yet), provided she could be sure she would not harm herself by so doing.

Probably the safest thing your patient can use is solution of peroxide of hydrogen; dark hair can be bleached with it to a light-brown or absolute white. To use it, all grease should first be removed, then the peroxide is applied full-strength. Were we in the lady's place, though, we should entrust the work to a skilled hairdresser. If for any reason such procedure is impossible, we suggest that she experiment first with a freshly clipped lock of hair. She can then readily discover the length of time the peroxide should be kept in contact with it to produce complete bleaching.

Peroxide does not injure the hair or scalp if rationally used, and the hair grows out again in its natural color; hence, if the lady desires to continue to present a very white poll, she must, from time to time reapply the solution to the roots of her hair. We would earnestly urge her, however, to leave her tresses *au naturel.*

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QUERY 6026.—"Psoriasis of Scalp and Shoulders." J. O. B., Idaho, is treating a man for psoriasis (typical). It first appeared on the scalp and around the edge of the hair, but now involves the shoulders and back. The Doctor "can dry it up, but in a few weeks or months it reappears." The disease is of five or six years' standing. There is no luetic or other taint. The patient is a rancher, is 30 years old, in robust health, with a family history almost perfect.

Psoriasis, especially when it appears upon the scalp and around the edges of the hair, generally proves extremely rebellious to treatment. As you doubtless are aware, it is essential in every such case to ascertain definitely the condition of the body-chemistry. Excellent results have followed the use of liquor arsenii compositus; that is, if given after the acidemia, which nearly always obtains, has been overcome. However, frequently socalled psoriasis in the locality named in reality is seborrheic eczema.

In most cases of psoriasis of the scalp, small lesions are found on the elbows and knees. As you are aware, psoriasis frequently disappears almost entirely during the summer months, reappearing with the colder weather.

Stelwagon, in his "Diseases of the Skin," says that, in the treatment of psoriasis, each individual case must receive careful study, for it is generally found that the patient is in need of treatment as much for himself as for the eruption. All possible etiologic factors should be kept in mind. Let us quote:

"His diet should be supervised, alcoholic stimulants practically withheld, except in old debilitated subjects; smoking kept within moderate limits or interdicted, and an excess of tea, coffee, and richly seasoned food avoided. In many cases, it will not be necessary to interfere with the diet, beyond limiting it to easily digested food; in others, especially in those of a plethoric habit, meat should be cut down or for a time prohibited; in still others, in anemic individuals, a rather liberal dietary should be allowed, with a full quantity of meat. The state of the nervous system should be inquired into, and all depressing influences guarded against. In fact, the patient is to be placed in as perfect a state of health as it is possible to attain. Open-air pleasures and sufficient exercise, systematically taken, will, in some individuals, have a material effect in aiding the medicinal treatment. Living as much as possible in the sunlight is beneficial (Hyde and Montgomery) —psoriasis is not common upon exposed parts."

In this case, the patient should wear a cap or hat which does not shade the affected area.

We suggest that you make a thorough physical examination and report your findings. It would be well also to have the urine examined.

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QUERY 6027.—"Exfoliative Erythema." A correspondent presents the following clinical data and asks us to make a diagnosis and outline the treatment.

A woman of twenty-five, married, two years ago had a miscarriage at five months. Her father is living, but her mother died of consumption. There is no specific history of any kind. The patient's weight at this time is 126 pounds, this being 15 pounds heavier than she ever has been before. When she

was 11 years old a number of symptoms began to make their appearance, as follows:

All over the body and scalp her skin will get dry and crack, assume a purple color, then peel off as in scarlet-fever. When warm weather comes on the accompanying prickling sensation causes intense pain and itching; at times, when she is about to take a step and the prickling occurs in the sole of a foot, it causes the leg to contract and she falls to the ground. The prickling begins at any time when she becomes heated. When the hot weather comes on and the skin becomes thoroughly active, the trouble disappears entirely, but will start again in the fall and continue until the hot weather of the following summer.

"The skin, to the touch, is dry but smooth, except for the scales; the scales do not leave a discolored spot beneath. At times, on the skin, there are long marks as though a pin had been drawn over it, and it appears as if it would crack, but does not. At rare interbals a few pimples form here and there. Her tongue is very red and large, having the appearance of raw beef. Her bowels are regular and menses are normal. Certain articles of food, that is, peanuts, cabbage, and carrots physic her. Milk disagrees with her. Her appetite is very good and she can eat heartily at all times. Her father has been—and still is—affected with this same trouble. The peeling, or scaling, of the skin and all of the symptoms mentioned are continuous, except for two or three months during the very hot weather."

We have very carefully considered the clinical data presented, and are frank to state that we feel unable to make a definite diagnosis. Evidently you have to do with some peculiar form of desquamative, exfoliative erythema; but, as perhaps you are aware, there are various forms of this condition, the diagnosis of which not always is easy.

In these conditions, occasionally only a part of the body is involved; then, again, almost the entire surface. Constitutional disturbance may either be insignificant or severe. Frequently at the onset of an attack there is more or less elevation of temperature. The initial rash may be punctiform or present a scarlatinous appearance, the color varying between a bright-pink to a deep- or even a violacious red. Recurrences are not at all uncommon. Thus, it seems, you are dealing with a recurrent exfoliative erythema.

The various cases of "skin shedding" reported undoubtedly are of this latter type. In many instances, the erythematous element is not pronounced; always, however, there is a tendency to periodicity. Sligh reports the case of a man of thirty-seven who had practically shed his entire skin every year since birth, the evidence of recurrence invariably showing on or about the same date. In all these cases, the symptoms disappear or are materially improved during the hot summer months, shedding coming on in the early fall, and continue till December or January. There is always the preliminary feeling of dryness of the skin, with some cracking.

The causes for such forms of erythema are many and often obscure. The autotoxemias —general or intestinal—undoubtedly are most frequently responsible. Septic infection may be a causative factor. Digestive derangements, the existence of a prolapsed and enlarged ovary, disturbance of the nerve centers, and so forth, have been deemed responsible.

The condition of the body-chemistry in this case should be definitely ascertained. We suggest that you send a specimen of urine (4 ounces from the 24-hour output, stating the total quantity voided), feces, and a blood smear to a competent pathologist. At the same time, doctor, make a very thorough physical examination, paying particular attention to the reflexes, condition of the pelvic organs, and so on, and report your findings in detail. Elimination—renal, dermal, and intestinal—the application to the skin of a mild antiseptic oil, and the administration of liquor arsenii compositus (Barclay), besides a good digestant (papain, gr. 1; pepsin, gr. 1; berberine, gr. 1-64), seemingly are indicated. A virile culture of the Bulgarian lactic-acid bacillus might also be given.

If you have access to Stelwagon's or other up to date work on diseases of the skin, study the chapters on erytheme hyperæmicum, erythema scarlatinoides, and so on.

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The Supreme Tragedy—War!

A MONTH ago the whole world seemed dreaming of that era of Universal Peace, so long promised, so long delayed, and, at last, we thought, almost at hand. There was—or at least we thought there was—a world-wide call to righteous living. Yet, today we are plunged into the midst of a war, in comparison with which all other combats of modern times seem likely to fade into insignificance.

This war of the nations came without warning. It may be that the events leading up to this tremendous conflict had been shaped in the great chancellaries of Europe, and that by the rulers of contending nations it was anticipated, perhaps even hoped for; still, to most men it came like the Last Trump, "in the twinkling of an eye," giving no opportunity to set in motion the repressive forces of popular opinion, no time for the sober second thought of the real thinking men of Europe to make itself felt.

One thing is certain—in the making of this war the people of Europe had no essential part. It is not waged by them or for them. It is not a war of deliverance from oppression; it is not a "holy war"—a war of religion; it is not a war of races—for Slav is arrayed against Slav and Teuton against Teuton.

It is useless to try now to analyze the causes of this awful disaster; and it is childish for German or English or Russian or French to try to shift the responsibility one upon the other. There is blood-guiltiness that all must share, and for which, if nations and their rulers are responsible to Almighty God, all must bear their portion of the just punishment that is sure to come.

But, whatever the match that lit the magazine, we feel that this explosion of the war-lust depends primarily upon militarism, and that militarism is the buttress of tyranny. Great armies and navies foster the love for war; they keep alive the fires of hatred between nations; strengthen faith in that ancient lie that "might makes right;" serve as instruments of oppression in the hands of tyrants; and put ready to the eager hands of kings the tools for conquest and destruction.

So far as America is concerned, it is a good augury that the breaking out of this great war has aroused no spirit of approval or enthusiasm, but rather one of general horror. Right or wrong, we Americans see in it but another evidence that monarchism—rulership of dynasties—is an anachronism, and that today it is but a weapon of Asmodeus, prince of devils. Upon the thrones of Europe we place the responsibility for establishing again this hell on earth.

And, so, we have read with approval an editorial in *The Chicago Tribune*, entitled "The Twilight of the Kings," which voiced the passionate hope that this war may be the doom of monarchism. "Western Europe," this writer says, "may be caught in this débacle; but never again;" and then goes on to speak in scathing terms about those rulers who give their people to destruction, while invoking with impious phrases and unconscious irony the approval of God upon their acts.

" 'And now I commend you to God,' said the Kaiser from his balcony to the people in the street. 'Go to church and kneel before God and pray for His help for our gallant army.' "

Yes, comments *The Tribune*, "pray that a farmer dragged from a Saxon field shall be speedier with a bayonet thrust than a wine-maker taken from his vines in the Aube; that a Berlin lawyer shall be steadier with the rifle than a Moscow merchant; that a machine-gun manned by Heidelberg students shall not jam and that one worked by Paris carpenters may.

"Pray that a Bavarian hop-grower, armed in a quarrel in which he has no heat, shall outmarch a wheat-grower from Poltava; that Cossacks from the Don shall be lured into barbed-wire entanglements and caught by masked guns; that an innkeeper of Salzberg shall blow the head off a baker from the Loire."

In like manner the emperors of Russia and of Austria invoke the help of Heaven for *their* arms, and seek to call down the lightnings of the Almighty to blast and ruin their enemies. "Our God always has stood by us," boastingly the White Czar told "his children."

If we pray—and well we may—let our prayers be for the millions who are sent out as a sacrifice to the Moloch Ambition, for the women who mourn, and for the children who starve. Let us pray that, with the passing of these dynasties and this crushing, inhuman medievalism, we may see the dawning of a new era, in which wars shall be no more, and all men, of all races, shall be brethren.

THE WAR, AND AMERICA

What effect will this European war have upon us here in America?

No man can answer this question, with any certainty that his prophecies will be fulfilled. It is too much, however, to hope that we shall entirely escape injury. We can be sure that the war will have serious and far-reaching consequences, even in our own country. Any great disaster that destroys the producing-power of any considerable number of its people puts a mortgage upon the future of any nation, and it also injures all the rest of the world; so closely are we woven together by the ties of commerce and industry.

Looking at the matter from a purely mercenary point of view, we must see that American foreign markets are now being wiped out, that new ones must be found for our surplus products, and that new sources of supply for many of the things required in everyday life must be created. Meanwhile many an American must feel the pinch of want, for many a promising industry will be destroyed and many others crippled before we can readjust ourselves to the new order of things.

There will be compensations, of course, and, looking at the matter from the standpoint of material interest, there are reasons to believe that we shall gain more than we may lose. Thus, the necessaries of life will command big prices in Europe. Wheat already is climbing and the prices of live-stock are going up every day. That means prosperity for the farmers of the West, who will have more money to spend than ever before. On the other hand, the crippling of the textile manufacturing industries of England has brought down temporarily the price of cotton; still, this is sure to rise again with the demand for clothing made necessary by the war. Agriculture will flourish, and that will mean easy times.

As to the things we buy from abroad, their prices also are advancing rapidly. Sugar, which we purchase largely from Germany, has gone up with a bound. The American sugar-industry, which promised to be destroyed by the removal of the duty, may not impossibly be revived by this war. All the luxuries—the wines, liquors, silks, jewelry, and finer fabrics of all kinds will become much more expensive. Drugs and chemicals are very largely produced in Germany, and their prices are already soaring, and there is no telling when they will stop. The opium alkaloids, atropine, hyoscine, bismuth, quinine, calomel, iodine and the iodides, phenol, the salicylates, and all the coal-tar remedies and many plant derivatives are advancing day by day.

In many of these things there already is a famine, and the probability is that some of them will become unobtainable if the war

continues for longer than a few months. The wise physician, therefore, will see the necessity of laying in generous supplies of whatever remedies he is using, in preparation for the shortage that is sure to come. Also, it is to his advantage to insist upon American-made goods. Today profit and patriotism honorably join hands.

The same pinch will be felt in almost every other industry. Many a concern that depends upon European sources for raw material has already been compelled to suspend the manufacture of certain items. Fortunately, the demand thus created will stimulate new industrial activity in America, and the domestic manufacture of thousands of articles for which we now depend upon Germany, France, and England is certain to be one of the results of this war.

Before many months, the wheels of the nation will be turning and our surplus will be finding its way into South America, the Orient, and other markets—and in ships carrying the American flag.

Financially, thanks largely to the energy and ability of our Government and our bankers, we are in excellent shape. There is no danger of a panic, and we even have the promise that plenty of credit will be provided for the extension of our business into foreign fields.

All things considered, Americans need not fear for their material welfare. Of all nations in the world, ours should suffer least and profit most. If the war should continue for many months, it is highly probable that one of its results will be, to give the United States the industrial and commercial supremacy of the world. But, even if it be short, the European upheaval will leave the industries of all those contending (and to an extent the neutral) nations crippled and disorganized; and in the meantime we should be forging further and further to the front.

While we must think now of trade, and may seek to capture the world's markets, we should not forget the disastrous consequences of this war upon our brethren beyond the seas. No nation can live to itself alone, and the welfare of one should be the welfare of all. We are likely to have this fact brought home to us sooner or later.

We are at the parting of the ways. Looking back, we can recall, as a part of our own lives and as something in which many of us have had a modest part, the most marvelous era in the history of human development. Only one other age can rival it—that great intellectual uprising which we know as the Renaissance. Our own period will go down into history as the Age of Invention and Industry. Is this era passing? Has it already departed? What is there at hand? What is to follow?

With anxious hearts and tear-dimmed eyes, we peer into the future, hoping that the new era toward which we are facing may make these fratricidal wars impossible, because the welfare of mankind has become the supreme law, transcending the selfish scheming of ministries and the petty ambitions of kings.

We hope—we believe—that the most far-reaching effect of this war, for us, will be the deepening of our own sense of moral responsibility, both as a nation and as individual units in a great democratic state. God grant that it may be so.

For I dipt into the future, far as human eye could see,
Saw the vision of the world, and all the wonder that would be;
Saw the heavens fill with commerce, argosies of magic sails,
Pilots of the purple twilight, dropping down with costly bales;
Heard the heavens fill with shouting, and there rain'd a ghastly dew
From the nations' airy navies grappling in the central blue;
Far along the world-wide whisper of the south wind rushing warm,
With the standards of the people plunging through the thunderstorm;
Till the war drum throbbed no longer, and the battle flags were furl'd
In the Parliament of Man, the Federation of the World!

—Alfred Tennyson.

THE HARRISON BILL PASSES THE SENATE

We have just heard from Washington that on August 15 the United States Senate passed the Harrison Antinarcotic Bill, after striking out the amendments requiring the physician to keep records of all narcotic drugs dispensed, and also rejecting Senator Pomerene's amendment exempting physicians from the operation of the law.

This bill passed the House of Representatives about a year ago. Some minor differences between the House bill and the Senate bill will have to be settled in conference, but since none of these are of vital consequence there is no doubt that these differences will be adjusted promptly. In all probability the bill will have been signed by the President and have become a law before this copy of CLINICAL MEDICINE reaches you.

As the Harrison bill was passed, it is, we believe, entirely acceptable to the great bulk

of the medical profession. We are especially glad to note that the objectionable record feature was rejected. This was bitterly opposed by thousands of physicians, who properly objected to this inquisitorial supervision.

It is to be hoped that now this bill has received the sanction of our national government, it will become the basis and model for state legislation, which will entirely put an end to the illicit traffic in narcotic drugs. We pledge the support of CLINICAL MEDICINE and of its readers to every sincere and disinterested effort to bring about this result.

LATER.—Since the preceding was written we have learned that the N. A. R. D., now in session in Philadelphia, is making a vigorous assault upon the conference committee, with the demand that the bill be modified before final acceptance in such a way as to throw additional burdens and risks upon the physician, and especially upon the dispensing physician. We learn that the druggists are bombarding the members of the conference committee with telegrams and have demanded a special hearing for their representatives. Such a ninth-hour attack, since it gives the medical profession little chance to be heard in rebuttal, is peculiarly insidious and dangerous. It is to be regretted that the N. A. R. D. is taking this attitude, and it is to be hoped the Senate bill will be accepted.

I say that if men lived like men indeed their houses would be temples—temples that we should hardly dare to injure, and in which it would make us holy to be permitted to live.—John Ruskin.

HOME AGAIN AFTER VACATION

As the September sun begins to fail before the advance-guard of winter, the nights grow cool, the school-bell rings, and mother and son turn their steps toward the city. The clean, white bath-room holds an allure superior to that of the lake; the gas-stove has its advantages; the many comforts, luxuries, and diversions of the great city begin to take on an attractiveness they did not possess when the lurid sun of July drove all movable population out.

How good it seems to be home again! How nice to have the movies, the delicatessen, the ice-cream-parlor, the department stores, the neighbors, the church; yes, Johnny even finds an excitement in meeting the other fellows at school, comparing notes, telling moving tales of adventure, trying the newly learned tricks. Rosy cheeks, developed muscles, bright eyes, minds stored with incident and experience, many are the good things accruing to the summer sojourn in mountain or forest, by lake or river, on the ranch or in the piney woods.

Not all the returns are so good. Many a returning pilgrim has brought with him a grievous memento, in the shape of disease. Hundreds and thousands coming from the four points of the compass may congregate at any one resort, and whatever malady is carried by any one of them may be carried back by many of the others, and thus transmitted far and wide.

The ancient idea was that these affections were transported, on the clothing, by fomites, or contagious elements. It may be so, but nowadays we look to insects, and, also, especially to the excretions. The source of many infections is to be looked for in the secretions of the respiratory membrane; but the great peril lies in the alimentary canal. Typhoid fever, dysentery, the newly arrived sprue, and a host of undefined gastrointestinal ailments are brought with them from the summer "health"-resorts to the city by returning vacationists. We may look for the usual autumnal outbreak of typhoid fever for this reason.

Investigating the toilet arrangements in the summer-resorts, we can only wonder that such attacks are not more common. The farmer and innkeeper have an immovable belief that when feces and urine go into the ground and out of sight that is the end of them; and that the best places for the family-well and the privy are as close as possible to the house, because of its convenience; if in close apposition, that is a matter of indifference. "This talk of surface drainage being injurious is all poppycock; everybody knows that the earth purifies sewage. Why, have we not heard from a health-officer of the great, cultured city of Boston, that nice, clean manure is not at all injurious in milk, unless in such quantity as to impart a brownish tint to the fluid and to communicate such a repulsive odor that it will deter buyers?"

At the present rate of progress, it seems likely that the farmers may be taught hygienic truths in about a thousand million years. We must look further for an adequate remedy. This we find in the intestinal antiseptics, intelligently employed.

Now Dr. Crozier Griffith asserts that there are today "very few of us who believe in the efficacy of intestinal antiseptics. Yet, this writer dares to announce himself as one of those "few"—the "few" numbering, accord-

ing to our estimate, about nine myriads out of the doctors of the United States. That allows one myriad who really do not believe in these agents, and four myriads who think they don't, or who say they don't, because they think it is highly scientific or pleasing to the ultra-stiffics to talk that way.

Of the myriad of true unbelievers, there isn't one who knows enough about the matter to defend his position logically. They all refer to current belief or explain that they have no belief in or use for drugs of any description. A few have set up the image of the Golden Guineapig, and worship it. That a hundred thousand human beings have taken the sulphocarbolates and, in consequence, found their feces lose abnormal odor, their symptoms relieved and health restored, means nothing at all. They ask; Where are your experiments on the Great Piglet?

This age and this land and this people demand something definite, something effective; and they get it in the sulphocarbolates. While the farmer is getting "modern science" into his privies and wells, those who resort at his place may take enough antiseptics to render themselves safe against any germs they may devour with their host's fresh vegetables and fried chickens. People may be contented to take the harmless remedy and wait until the learned doctors shall agree as to just how this chemical works. To make the assurance of safety doubly sure, those under 45 should be immunized by injections of the typhoid prophylactic vaccine

Every man who sends his family to a summer-resort should have his doctor first investigate its sanitation, and he send them only to such places as receive the doctor's sanction. Otherwise each exposed member should have a daily dose of the antiseptic, besides an occasional intestinal flush of saline laxatives. This procedure is far better than to wait until some intestinal malady has developed and then to cuss the farmer.

Any digestive disorder at a summer-place should be promptly and thoroughly looked into. Too often these are attributed to change of water or to the use of green fruits or vegetables, and are suffered to go without any real attention, beyond taking a little ginger or castor-oil. When later the infected person comes down with typhoid fever, the return to city water is likely to be blamed.

More than ever we are inclined to believe that the day has come for the family doctor to assume the position of sanitary adviser or director; to prevent disease rather than to wait until it has developed. In his own clientele, this writer has explained this matter, and has suggested that he should be remunerated for preventing illness; and he has yet to make this suggestion and not have it received with enthusiasm. At this day, with all the weight of today's duties and responsibilities weighing upon people, nobody can afford to be ill.

THE DOCTOR AND THE DRUG-HABIT

I have before me two newspaper clippings upon which I am moved to do a little talking for publication. The first relates to the arrest of a certain physician in New York on the charge of selling morphine and other contraband drugs to the inmates of Blackwell Island Workhouse, out of which nefarious trade he is said to have accumulated a very handsome competency. Concerning this particular case, of course, I am not in a position to make any pointed comment, as it still is *sub judice;* but as to the prosecution and punishment of such offenders in general among the medical profession, I feel as the man in the story did who was not present at the funeral of a certain acquaintance, but heartily approved of it.

At all times and on general principles, the medical profession owes a debt of honor to itself and to the public to preserve a more than ordinary cleanness of the hands that hold the world's physical and mental health in their keeping and minister to humanity's sufferings and weaknesses.

It is a base enough business in any man to make a living by pandering to the depravity of a lot of wretched degenerates in the clutches of a miserable habit that destroys both body and soul; but there is a peculiarly atrocious infamy in such a dastardly practice on the part of a physician, since he knows, better than anyone else, the horror of the thing and his honor is pledged to uplift the pitiable beings he is dragging down. Hardly any condemnation can be too scathing for a man who thus betrays his professional and human trust; and the medical profession should be quick to purge itself of such disgraceful members.

At this particular time, it is more than ever imperative that the medical profession should maintain, with unquestioned good faith and unremitting alertness, the cleanness of its skirts in this matter of habit-making drugs, in view of the protests which we are now making against the proposed extension of restrictive legislation upon this very subject aimed at medical men.

We, as doctors, cannot consistently demand a free hand in the ordering and dispensing of these drugs unless we are able to show a clean record in our handling of them. And while we can not, as a body, prevent individual violations of the trust, we can and should be prompt to repudiate such violators and to cast them out of our midst.

All of which being said, and emphasized, I wish to pay my respects to the second newspaper clipping, in which the writer draws from the incident above referred to, and from a few others like it, the conclusion that doctors, as a class, are makers of drug-fiends.

Such a conclusion is absolutely unwarranted and is a gross and uncalled-for libel on the medical profession. There are, of course a few scoundrels in the medical fraternity, as there are in every social group made up of units of human nature.

At that, I believe the medical profession will compare favorably in this respect with any other group. And, unfortunately, we cannot deny that here and there a case does occur in which the doctor, through carelessness or excess of zeal, induces a drug-habit in his patient; but this is so rare, as compared with the other factors that lead men into drug-addiction and furnish them the drug, that it is scarcely to be reckoned with.

When all has been admitted that can, or ought to, be admitted concerning the doctor's part in this business, it is a very very small, inconsiderable, individual part, and which by no means can be laid up against the profession as a whole.

No, the doctor is not a maker of drug-fiends. On the contrary, the physician, of all men, is the most earnest and intelligent and active crusader against the drug-evil, the friend and helper of its poor, besotted victims, and the relentless castigator of all who trade in it, whether they be in the medical profession or outside of it.

And they asked me how I did it,
  And I gave them the Scripture text,
You keep your light so shining,
  A little ahead of the next.
They copied all they could follow,
  But they couldn't copy my mind.
And I left them sweating and stealing,
  A year and a half behind.
—Rudyard Kipling.

MEDICINE NOT PHILANTHROPY

I have before me two citations, from two very different sources both as to place and time, that recently appeared in current medical and religious journals, respectively, upon which I am minded to make a little preachment in the interest of honesty and common sense.

One of these quotations is from the writings of Dr. Andrew Taylor Still, the originator of Osteopathy, who lived and died in the last century. It is as follows:

"My business is, to destroy my business. I teach people how to do without me. Health is a normal condition, not disease. A science of drugs can never help produce a perfect race, free from the demons of fear and disease."

The other one is taken from the editorial pages of a present-day religious journal, in which the writer is paying his respects to the physician as a public benefactor. It reads.:

"Those who wince under the high bills presented for medical attention may sometimes lose sight of the beneficent crusade which all reputable doctors are making for the prevention of disease. It would seem they are thus working directly against their own financial interests."

I cite both of these quotations, where one would have served the purpose, because they exemplify the long standing and the wide prevalence of the fallacy which I wish to expose, and, so far as I may, to explode. They are, both of them, factitious statements, but containing a plausible error, one with which we have managed to delude ourselves for so many years, and to which we have given such wide and popular currency, that it is almost as much as a medical-editor's life is worth to point it out—especially in these days, when the error has acquired more plausibility than ever.

Heaven knows, the medical profession, both in its past record and in its present showing, has enough genuine cause for legitimate pride, without making cheap bids for gratuitous credit, on grounds that are spurious as well as foolish. The continual iteration of this assertion, that the medical profession is working against its own financial interests, must be as nauseating to the sensible layman as it is ridiculous to the sane physician; and, if the generality of doctors could only be brought to see it, such a statement is not very flattering to the intelligence of the profession as a whole.

Candidly, no medical man is deliberately and systematically working against his own interests; if he did, he would be neither a hero nor a martyr, but a fool. That, be it remarked in passing, is one of the legal tests of insanity. Not that there may not be, here and there, individual physicians who, with what they consider sufficient reason, are ut

terly sacrificing their own interests to that of the race, to their own continual hurt. But we now are speaking of aggregates and averages, not of isolated exceptions; of the profession, not of individual men.

As a profession, we do not believe that people will ever be able to do without us. We hope they will not—in our day, at least. Like all other aggregations of men, we are made up of human beings, with whom it always has been, and still continues to be, a natural law that nothing worth while is ever accomplished except through self-interest.

True, we are learning, in common with every other calling (perhaps a little faster than most callings), that this self-interest is much more highly subserved when it aligns itself with the general weal. So that, if we chose to be cynical, we could persuade ourselves that even in this broadening of our interests there was a dominating element of selfishness. But I, for one, am no cynic, and I verily believe we are really entitled to some credit in that we have dared, more than perhaps any other body of men has done, this larger upper stratum of self-interest.

But to say that we are deliberately and persistently working to injure our own interests or to put ourselves out of business, that is arrant nonsense. And to boast about it and make a bid for praise on that ground, is worse than nonsense—it is sheer cant. We may not expect that the nature of our service will always remain the same; we may reasonably believe that pills and tinctures will give way to some other agents of healing; we may even look forward to the time when the business of the physician will be to keep people out of illness rather than to get them out of it. Nevertheless, it may safely be postulated that the medical profession, as a whole is not predicating any of its thought or conduct on the assumption of teaching the people to do without it.

The sooner we stop giving currency to such humbug, the less ridiculous we shall make ourselves.

THE BUBONIC PLAGUE IN NEW ORLEANS

Eternal vigilance is the price of safety; and this price, unceasingly and unstintingly paid by the United States Public Health Service, has held this country so safe from the invasion of bubonic plague that in the past twenty years the dread disease only once gained a foothold on American soil. Now, for the second time in that period, it has made its appearance in New Orleans, where, however, it is receiving vigorous and effective attention at the hands of Doctors Blue and Rucker and their efficient staff of disease-fighters.

One of the remarkable and significant things about this recent invasion is the calmness and equability with which it is regarded, not only by the country at large, but even by the stricken city. This attitude is not expressive of a callous indifference or ignorant belittlement of the situation. It indicates, on the contrary, an intelligent understanding of the measures or controlling this Black Death and a large confidence in the men who have the measures in hand. Outside the invaded city, and no doubt among a great many of its own citizens, one hardly knows that the plague exists, except as one sees references to it from time to time in the medical and lay press. And this is not due to any conspiracy of silence, for there never was a situation of the kind more frankly and openly dealt with than this one, but to the fact that there are efficient, capable men there on the job and it is being adequately taken care of in a business-like manner.

But we, who are in the quiet zone, ought not to lose sight of the tireless, well-directed activities at the seat of war which guarantee this peaceful security. Surgeon-General Blue and his associates are doing valiant and high-grade work, putting into energetic and intelligent practice all the knowledge that modern research has brought concerning the black plague. His own wide experience in fighting this disease in Honolulu and San Francisco, and Surgeon Creel's yeoman work at Porto Rico, have made these men masterly experts in the control of such a situation; and they are handling it in a masterly fashion.

The task promises to be an arduous one. According to the official report of the Public Health Department, the infection among the rats appears to be widely disseminated, and it will be necessary to make a rodent survey of the entire city. Special ordinances have been adopted regarding the rat-proofing of buildings, the maintenance of chickens, the disposal of garbage, and the fending off of ships.

There is not much—practically nothing, indeed—that we, as individuals, can do in the way of actual assistance in the matter. The burden falls wholly on the men who are on the spot. But we can at least extend to Surgeon-General Blue and his associates our sympathies and good wishes, and let them know that the great work they are doing and have done, at many places, in many ways, for

many years, is heartily appreciated. It is little enough that they get, in the way of material reward, for their splendid work; it is but just that they should receive the highest honor and gratitude of the profession and of the public.

Don't worry, though above your head
The threatening storm clouds meet.
The rainbow, as of yore, shall spread
Its sign of promise sweet.
The flowers fled when winter gray
Proclaimed again his cruel sway
Yet early blossoms smile and say
"Don't worry."

WRITING PRESCRIPTIONS IN ENGLISH

Exercising its usual privilege of censorship of the entire world and all that is in it, *The Chicago American* recently came out with an editorial entitled "Doctors' Prescriptions in Plain English." This editorial uses as a text the Boylan Act, just made law in New York State, which, among other things, requires physicians, dentists, and veterinarians to write their prescriptions for habit-forming drugs upon blanks supplied by the State.

By way of comment upon this law, the writer of the editorial cited goes on to say that "every doctor should be compelled to write his prescriptions plainly, so that the patient, the father or mother, or husband or wife, would know what drugs a prescription calls for;" and, furthermore, that "he should be compelled to write out in plain English the name and character of the drug he prescribes." Then follows the still more erudite suggestion that "he should not be allowed to insert any poison in a prescription without writing plainly the word 'poison' on the prescription."

This again illustrates the truth of the trite saying that "a little knowledge is a dangerous thing." If the *American* writer knew a little more about medicine and doctors, he would not be guilty of perpetrating such asinine and dangerous rot. It is not true that physicians write their prescriptions in Latin merely for the sake of creating an atmosphere of "mystery and gloomy superiority," as stated by the writer in the *American*. Their purpose in so doing is, primarily, to protect the patient himself.

The majority of remedies are simple things; the names of most of them are household words, and there is nothing mysterious about them. The great mystery is the human body, and so great and so complex a problem is this, so dangerous is it to tamper with it needlessly, that it is necessary to throw around the patient certain safeguards, to prevent him from falling into the habit of self-medication. Medicines, generally speaking, are not specifics for diseases. They are used to correct certain aberrations of function, and they must be used nicely, wisely, with an exact appreciation of their action in every individual case.

The people generally are looking for specifics—"cures" for dyspepsia, gastritis, locomotor ataxia, corns, piles, and every other ailment flesh is heir to. If the average person gets a "prescription" that helps him, he is likely to jump to the conclusion that it will help every other individual who has pains and ailments like his own; and thus it comes that this simple remedy, that "useful prescription," is peddled around, and even the Family Doctor Department of great newspapers, such as the *American*, helps along this idea—encouraging thousands of people to take drugs, they do not need, for diseases which do not exist. Thus used, drugs do infinitely more harm than good.

The popularization of self-medication is dangerous, and especially is this true with regard to drugs used for the alleviation of pain. The physician, with all his shortcomings, is a much safer guide than any layman possibly can be, and he (the doctor) knows that it is unwise to encourage patients in the belief or the inference that they themselves can select their own anodynes and purchase them at any drugstore.

If doctors would control absolutely the administration of narcotics, there would be few drug-habitués. It is because people come to know the names of these drugs, become too familiar with them and thus acquire the contempt and self-pride of familiarity, that they fall easy slaves to these habits.

No true physician wilfully permits or encourages the use of narcotics; but he can do nothing for or with those who are beyond his control.

Even more foolish is the suggestion that the physician be required to write the word "Poison" on every prescription which contains a poison. What does the astute editor mean by this? Let him define a poison—if he can. If he can do this accurately, he is doing something that no medical man yet has succeeded in doing. The compilers of the U. S. Pharmacopeia have refused to undertake this "simple problem," and even our lawmakers have hesitated to grapple with it. A Philadelphia pharmacist has suggested that

if any drug kills in doses of 2 grains it shall be considered a poison. In one state a bill was introduced last year that required every drug which caused death in doses of 20 grains, if a solid, or 1 dram if a liquid, to be labeled "Poison."

The simple truth is, nobody knows just what a poison is and what it is not. Is belladonna a poison? How about digitalis, camphor, ergot, quinine, calomel, about the horde of other things that have produced fatalities, often in relatively small doses?

The layman loses sight of the fact that drugs employed as remedial agents are not administered for their poisonous action. They are ordinarily taken to produce certain definite modifications of function. To suggest, by means of a label or otherwise, that, as used in the prescription, they are dangerous, is to put in the patient's mind a psychological impulse which is potent for evil and may undo any good that otherwise might be effected.

Let the shoemaker stick to his last. Let our newspapers attend to their business of giving the people news about the war in Europe, about President Wilson's policies, the revolution in Mexico, the latest scandal in society, or anything else in which the public may be interested. Those are things they are supposed to know something about. As to the practice of medicine, these men are no more competent to give advice than they are to tell a plumber how to wrap a joint or an architect how to design a skyscraper.

The medical profession consists for the main part of highminded, educated men, who have many problems to grapple with, and are dealing with them as wisely and conscientiously as they know how.

The writer can not close this editorial without branding as a falsehood one other statement made by *The American*, namely, that "it is notorious that the great majority of drug-fiends have been created innocently, carelessly or otherwise by doctors." In many cases, it is true, the victim has obtained his *first* dose from the doctor; in the vast majority of instances, however, the narcotic was given to relieve great suffering, and not only is its use justified under such circumstances, but to withhold it would brand the medical attendant as cruel and inhuman. However, doctors do not keep on dosing out or prescribing these drugs indefinitely.

The real causes of narcotic habituation are this damnable itch for self-medication—encouraged by the daily press in editorials like the one we are discussing—and the ease with which it has been, and still is, possible to secure these drugs at any drugstore. Physicians *do not*, except in the rarest of instances, keep on repeating prescriptions for narcotics The trouble is that they are refilled again and again without orders from the doctor.

The present writer has been following the newspaper reports of arrests of persons engaged in the traffic in habit-forming drugs and has been struck by the fact that it is not so much sick people who are being exploited as it is the weaklings—the negroes in the South, the denizens of the red-light districts, and the ignorant and poverty-stricken people of the slums. These people somehow are led to believe that these "medicines" are the panaceas which they need. Could they but be persuaded to consult a physician and depend upon his advice before resorting to drugs, ninety-nine percent of them could be saved.

It makes one's blood boil with indignation to read these assaults upon the physician It is shameful that journals such as *The American* should be parties to this program of defamation of the medical profession which latter, however—to its shame—submits without protest to the efforts of it enemies to injure its position and prestig and bring its members into public disrepute

Great men and little have the same accidents, the same temptations, the same passions; but one is on the felloe of the wheel and the other near the axle, and so less agitated by the same revolution.—Pascal.

FISCHER'S VAGOTONIA THEORY OF SEA-SICKNESS

Elsewhere in these pages (see May, p. 428) there has been presented in outline Dr. J. Fischer's theory regarding the nature of seasickness, together with his actual experience with an application of a rational causal therapy based thereon. In view of this hitherto puzzling trouble affecting so large a portion of humanity, a recurrence to this subject seems justified; the idea being, to set forth the new theory somewhat more in detail.

To begin with, Fischer assumes, in persons prone to seasickness, an undue irritability of the pneumogastric nerve (vagotonia); and, further, this view, on its face, is supported by the favorable action of atropine in this condition. (Proof by causal therapy.) Then Fischer shows how, at the hand of his vagotonia theory, not only the effect of the pendulum movements—as also occasional

psychic influence—upon the autonomic (in fact, upon the entire vegetative) nervous system can satisfactorily be explained, but also nearly all other peculiar phenomena observed in seasickness; even covering the seeming contradictions between the mechanistic and the psychologic theories. Still, that more or less in the theory as yet is hypothetic is admitted by the author. In what follows we shall adhere more or less closely to the original text. (Cf. *Muench. Med. Woch.*, 1913, p. 1649.)

How, now, Fischer asks, can the action of atropine, curative as well as prophylactic—an action which impresses one as a causal therapy—be explained? That the atropine influences the vegetative nervous system, seems plausible at once; still, although this mydriatic, in conjunction with strychnine, has successfully been prescribed in seasickness for a quarter of century (Skinner, Girard), the exact manner of its action largely remained an unsolved problem.

Now, however—as already pointed out in our previous article—the researches of L. R. Mueller, Langley, Gaskell, and others upon the physiology of the vegetative nervous system, and more particularly the doctrine of vagotonia as promulgated by Eppinger and Hess, serve to furnish us with a clue to its solution. And it must be confessed that Fischer's presentation rather captivates one's fancy.

What, then, do we know today about the physiology and pathology of the vagus, and, more broadly, the autonomic nervous system?

The normal peristaltic movements of the stomach, as also antiperistalsis—at least so far as cerebral emesis is concerned—is initiated, determined, by the pneumogastric nerve; and antiperistaltic movements can be inaugurated solely by psychic processes. Irritation of the same nerve frequently gives rise to gastric hypersecretion and hyperacidity; also, to accelerated intestinal peristalsis and, above all, to spastic constipation. Pharmacologic irritation of the nerve produces salivation. The vagus influences the circulatory apparatus: like the sympathicus, it may control vasomotor functions; by its inhibitory action upon the heart, it may slow the pulse, affect the regularity, evenness and strength of the cardiac contractions, and lower blood pressure. Further, respiration may be accelerated or diminished; also, the sudoriparous apparatus may be aroused to activity. Finally, the emotions exert a profound influence upon the vital organs, and these in turn influence the emotional states through the vegetative nervous system.

Now let us briefly apply this knowledge to the leading phenomena observed in naupathia (seasickness) and allied derangements.

First of all, we have the nausea and vomiting, and often passengers are attacked even while yet inside the harbor and with the sea quiescent. It is plain, if we view seasickness as a neurosis of the vegetative—and, more particularly, of the autonomic—nervous system, that these phenomena may unrestrainedly be referred to psychic processes acting upon the gastric motor centers. Similarly, a large percentage of the prominent symptoms are readily explicable upon the same assumption of a neurosis of the vegetative system. Thus, for instance, the sialorrhea (virtually the first sign), increased gastric secretion and acidity, clammy skin and cold perspiration, constipation (pronounced in proportion to the severity of the attack and relieved, concurrently with it, by atropine), the circulatory disturbances, including pallor, chills, tachycardia, bradycardia, giddiness, irregular and uneven heart action, lowered cardiac sounds, hypotonia; while ill-humor, apathy, difficult thinking, all these phenomena plainly announce an alteration of the psychic state.

Some of these pathologic states Fischer discusses more in detail. Thus, he points out that the vagus as well as the sympathicus (trisplanchnic nerve) have to do with vasomotoric functions; of what nature these are, however, we do not know. Pallor of the face and giddiness occur after pharmacologic (e. g. after physostigmine) irritation of the pneumogastric nerve; hence, these symptoms of seasickness well may be referred to irritation of the autonomic system. The tachycardia, of course, is connected with the sympathetic nervous system. In this manner, it is averred, nearly all the other symptoms can be deduced from an irritation of the autonomic system, and only few having to be referred to the sympathetic nervous system.

At the risk of redundancy, a few points previously touched upon may in this connection be treated here a little more in detail; one question being why very young children never and the aged rarely are taken seasick.

Let us recur once more to the writings of Eppinger, Hess, Dehio, and Krehl. Briefly stated, the theory of these authors is that the vagotonics are almost exclusively persons of middle age, while in the aged the vagotonus either is extremely weak or absent entirely. As for infants and the very young children,

Plaundler and Schlossmann (corroborated by Soltmann's animal experiments) assert that in them the subsequent equilibrium between the excitating and inhibiting forces—in other words, between the sympathetic (modern classification) and the autonomic nervous systems—has not as yet been developed or established. Consequently, Fischer argues, their immunity may be considered to arise from a lowered vagotonus and a reduced irritability of the pneumogastric nerve.

Next, we have the disposition to seasickness or immunity from attack. The condition (congenital or acquired) of the vagus—high or low irritability—will account for this fact also. But, more, some persons ordinarily immune may fall victims when the vagus happens to be unusually irritable through a temporary indisposition, while the exciting cause may be unduly severe; in addition, their normal resistance may be overcome at times either by certain psychic states or by nasal or visual impressions (odors, the wave motion, and the like) acting reflexly upon the pneumogastric nerve. A parallel example is the fact that some persons or others at some particular time require much larger than ordinary doses of pilocarpine to incite its physiologic effects. We also are reminded by these facts that the will virtually is without influence over the vegetative nerves and the organs under their influence.

As to becoming habituated to the sea, Fischer refers to other similar occurrences, as, for example, the rapidity with which the pneumogastric nerve becomes accustomed to the poisonous nicotine in the case of neophyte users of tobacco.

Just how and why the vegetative, and more specifically the autonomic, nervous system should be involved through oscillatory movements of the body, Fischer finds more difficulty in answering categorically. However, he asserts, following L. R. Mueller, that the vegetative system can be excitated by a primary sensible stimulant, even though this is not consciously recognized. Then he assumes, as already has been pointed out, that the exterior impulse conveyed by the ship's oscillations conditions a disturbance of the energetics of the tissues, a rapidly passing alteration in their molecular mechanics as defined by Rossbach. Then, further, possibly these internal disturbances may preeminently affect the autonomic nerves by virtue of an elective "affinity."

Moreover, and principally, naupathia possibly manifests itself predominantly as an irritation of the autonomic nervous system, because unpleasant symptoms produced by irritation of the sympathicus, or pneumogastric nerve, are comparatively light; while the decidedly disagreeable effects resulting from undue irritation of the autonomic nervous system are prone to impress us far more vividly. The practical deductions from these presentations, as drawn by Friedlaender (see CLINIC for May, p. 429), will be remembered by the reader, hence, need not be repeated here.

Inasmuch as the nomenclature employed in this presentation may confuse those students who have not kept in very close touch with latest research-work in physiology, and consequent modifications of older views, it is possible that sometime we may recur to the subject of the sympathetic nervous system as now classified.

However, in order to aid in a clear understanding of Fischer's theory in all its bearings, the following brief explanation may not be amiss. Since the labors of the Englishman Langley, and of other later research-workers, the sympathetic nervous system, as it has been known—in contradistinction from the cerebrospinal, or central—is coming to be recognized as the vegetative system (also as ganglionic), while the term "sympathetic" has been confined to that division classified as the dorsolumbar, with its visceral branch-chains. The rest of the ganglionic system has been named the autonomic system, because of being independent from the central nervous system; it also is referred to as the parasympathetic. But this autonomic system again is subdivided into the midbrain autonomic, the bulbar autonomic, and the sacral autonomic systems, these not being identical in structure and as to function.

BIG BUSINESS AND HEALTH

There is published in Atchison, Kansas, a periodical—half newspaper half magazine—under the title of *E. W. Howe's Monthly*, and it is distinctly original and worth while. We do not know just what the policy and motives of the publication may be, but it really is a very sane and wholesome presentation, in not too solemn a vein, of the unpopular side of things, which is exceedingly refreshing, not to say salutary, in these days of popular socialistic clamor.

In a recent issue of this remarkable periodical (and for which we recommend our readers to subscribe—you get a year's subscription for ten cents, a life subscription for a dollar), the editor drew a very terse comparison be-

tween the politician and the business man, especially between the political reformer and the much-abused "big-business" man.

In brief, his argument was this: The real test, after all, of any man's or any institution's usefulness is his or its influence upon actual living-conditions; the old test, in short, of making two blades of grass to grow where but one grew before. Judged by this criterion, he pertinently asked, what had any of the political reformers, from the President down, or any of their reform measures done to claim any public recognition? Not one of them had made actual living-conditions the least bit easier or better. One business concern, the editor declares, that may have given employment to a large number of men is worth as much as all the former.

Curiously enough, on the heels of this preachment from Atchison comes an editorial in a Chicago daily paper noted (we had almost said notorious) for its socialistic tendencies and its bitter animosity toward capital, and points a special instance of this same truth in the case of the Rockefeller Institute. It cites the fact that John D. Rockefeller has given 12½ million dollars for medical research, and then justly asserts that "the fight made against disease in the Rockefeller Institute is the most scientific and intelligent made anywhere in the world." The paper then goes on to point out that this represents, in reality, a sort of trust which the great oil-king has undertaken of the people's own resources which the public itself was incapable of handling for its own advantage.

"The people of the United States," says this newspaper further, "gave the oil and many railroads and other industries of the country to John D. Rockefeller, and he, in return, like a sort of benevolent financial providence, is giving the people health for the millions that they gave him."

"The bargain that the people made," continues the writer, "was a good bargain. They may congratulate themselves on having given to Rockefeller millions of dollars' worth of oil and taken from him in exchange tens of thousands of millions of dollars' worth of health. He may own an ocean of money, but he isn't drinking it up, wasting it, and pouring it down a rat-hole. It will all be here when he is gone; and meanwhile he is using it for the people considerably better than the public servants use the public money for the people."

To all of which we say an earnest Amen. In the midst of the popular outcry of criticism and abuse which it is the fashion nowadays to raise against the big business man—and without prejudice to our own right to criticize some of his acts and his methods—medicine, at least, should recognize the splendid aid that Rockefeller has contributed to the great twentieth-century crusade against disease and death, and the equally great campaign of health conservation. Without the generous and far-sighted cooperation of these big men—for they are big, whatever else they may be—not half, no, not a quarter of the magnificent work of the last twenty years in this direction could have been done. And we physicians should be the first to acknowledge the debt.

More than that. The influence and cooperation of the big business man in this matter have given to the whole movement an economic status and impetus without which no movement ever achieves world-wide or permanent progress. It is because these men have recognized the value and importance of health as a public asset, and the safeguarding of health as a public investment, that they have given their thought and money to the movement at all.

This is the significance of what might seem an anomalous phenomenon, namely, that this "commercial" age should be the one in which so apparently philanthropic a science as medicine has received the greatest impetus. In more romantic, utopian times, health, like life, was counted a thing to be lightly thrown away. In these days, it has a market value. And, repugnant as it may be to our fine sensibilities, health and medicine have to be commercialized or at least given an economic standing in order to be entered in the list of world-processes.

"It seems that either extreme of soft and polished or rough and brutal manner can succeed with a physician." —Miss Edgeworth, in "Patronage." Happily, the "rough and brutal" are going out of fashion in these times, in this country.

NEURASTHENIA

Although neurasthenia has been denominated the American disease, it is as well known in Europe as it is here. In France especially, Beard's disease, as it used to be called, has received attention and its causation has been studied.

Many cases depend exclusively, it is thought, upon excessive intellectual labors, such as, for instance, preparing for examinations. Under the pressure of anxiety, apprehension for the possible results, consciousness

of the many gaps in the candidate's knowledge, and long hours spent in the endeavor to acquire what may be demanded, and more especially the neglect of personal hygiene that is inevitably the case, it is little wonder that the unfortunate young man comes to the ordeal in a state of mental and physical exhaustion that seriously interferes with his capacity to display what erudition he really possesses.

Heredity has some influence; and the son of a neurotic mother is more likely to fail at the critical time than he whose parents are of a more stolid type. It is with these children that the benefits of a good training are inestimable. A wise régime, accustoming the boy to endure disagreeable things without allowing them to impress him unpleasantly, goes far in obviating the malefic inheritance. The daily cold bath, the gentle but persistent push out of the solitude of his rooms to the society of his fellows and the rough but wholesome discipline of the play-ground harden the skin and subdue the tendency to undue delicacy.

It is one of the grave faults of our educational system that so much importance is being placed upon examinations. Designed to ascertain the degree to which the student has been able to assimilate his teachings, that the capacity of teacher as well as of pupil may be estimated and the faults of both corrected, the pupil is allowed to put himself in the attitude of a prisoner at the bar, whose future depends on his success in proving himself innocent. Actually, nothing in an examination is of as much value to the student as the discovery of a defect of which he has been unconscious, and which he has now the opportunity of remedying. How often has one been found who saw this truth? Instead of this, the poor boy who misses a question feels that he is "lost."

The principal direct cause of neurasthenia may be found in the neglect of personal hygiene. One of the strongest indictments of the modern school is the fact that the graduates of medical and nurses' colleges come to these final trials in such a state of exhaustion as to make one wonder what they could have been taught, that the essentials of sanitation have been so wofully neglected. If one percent of the time wasted trying to teach them things they never by any possibility can utilize in after life were devoted to instructing them in the art of understanding their own bodies and how to keep them in health, great good would be effected. The nurse or the doctor who has broken down under the strain of preparation is not less absurd than the bald-headed man selling hair tonics.

The neurasthenic always is constipated. In dealing with this condition, the general rule in dosing this malady must be followed, namely, that the smallest doses and the mildest remedies effective are to be chosen. A peristaltic tonic consisting of minute proportions of aloin, atropine, strychnine, capsicum, and emetine answers better than any single remedy. A little mild saline laxative in the early morning sweeps out the tract, without weakening, or unduly hurrying the nutritive current through the bowel. These should be aided by a diet containing a large proportion of fresh fruit-juices, best taken raw, to secure the benefits accruing from vegetable nucleins. But all these men are undernourished, and their slight digestive powers make them difficult to feed sufficiently. The artificial digestants are needed in full doses, especially papayotin.

The nervous debility demands fats; and codliver-oil comes in these cases pretty close to the ancient conception of the elixir of life. But the patient can not take it; or any other fat that he can taste. If, in this day of hurry-and-cut, one has the patience to rub this oil into the skin every day for a month, he will have had a lesson, as to the value of drugs, that will go far to dissipate any therapeutic pessimism.

The digestive troubles have attracted attention abroad, where gastralgia, dilatation of the stomach and the enteritides are sometimes recognized as causes of neurasthenia, sometimes as results. Both contentions are right, as a vicious circle is established; and the weakened digestion and the exhausted nervous system mutually react upon each other. So with the visual derangements, where the ill effects of a congenital defect are enormously exaggerated.

Sargent attributes much of the difficulty to suprarenal deficiency. This probably is true in some instances, but there seems no good reason for ascribing to these organs the exclusive qualification to induce such disease. The liver is more frequently at fault. The sexual organs are nearly always affected; but here also it is difficult to distinguish between cause and effect. The absurd importance attached to sexual faults by the earlier observers has been discounted by calmer consideration, and Acton's gloomy views would now only excite derision. The pronounced debility following every sexual indulgence by a neurasthenic is character-

istic of the effects following any exercise of functions demanding much exertion on the patient's part.

In the treatment of neurasthenia, we must ever bear in mind the feebleness of the patient's reactions and the speedy exhaustion of irritability by very moderate doses of any remedy. Careful, cautious treatment of every disorder that in itself may be a cause of debility, the removal of every possible leakage of nerve-force is a task that demands systematic, minute personal investigation rather than generally applicable remedies.

The milder tonics replace strychnine here; and quassia, scutellaria, cypripedium, and especially xanthoxylon fill the need in a manner to surprise those who are accustomed to look on these feeble remedies as unworthy of serious consideration. Caffeine valerate is a useful nervine for moments of special debility. Nervous irritability responds better to sumbul, the valerates, cicutine hydrobromide, and monobromated camphor than to the alkali bromides. Sleep is secured by digitalis better than by hypnotics.

Febrile temperatures respond quickly to anemonin rather than to aconitine. Quinine invariably is harmful, as are the salicylates and anilines. Many times calcium hunger demands salts of that element, the lactophosphate or the citrate. Sometimes a week of zinc phosphide, a milligram only, seven times a day, gives a desirable fillip to the nerve-centers and makes subsequent medication more efficacious.

I have said nothing of the non-drug methods, because these usually are too tiresome, too expensive, too tedious, and too ineffective for this malady. Yes, I mean just what I say; and I defy their advocates to prove me wrong.

The treatment here advocated may be, in a sense, preliminary; but it is so in the same manner that the well-laid plans of the general insure a victory before the first gun of battle has been fired or as the preceding moves on the chess board make the checkmate possible. Yet, I believe there is a distinct specific remedy for neurasthenia, applicable in every case, filling a need felt by every patient—that remedy is nuclein.

After having been shoved aside by a succession of newer organic remedies, nuclein is now beginning to justify the faith of those who clung to it regardless of the waves of popular fancy. Here and there are cropping up experiences like that detailed by Hauber in the July number of Clinical Medicine, that are significant.

The dose of nuclein in neurasthenia should not exceed 30 minims of the solution, divided, a day, and should be given hypodermically or under the tongue. It should be continued for a month before any estimate is made of its effects; for, whenever we seek to replace a pathologic condition by a natural one, we must follow nature's methods, which never are violent or hurried.

The results will depend upon the discretion and knowledge with which the treatment is applied. No malady demands the personal equation to be applied with more care than neurasthenia; and the same agencies may cure one case and wreck another.

I have great admiration for the man who does things, and also for the man who gets things done; but I have little respect for the man who makes unreasonable demands.—The Caxton.

OUR SPECIAL NEWS FROM THE WAR ZONE

Clinical Medicine is peculiarly fortunate in having two representatives in Europe at the present time who, we hope, will soon be in a position to supply us with intimate pictures of such phases of the war situation as will appeal particularly to readers of this journal. Dr. H. J. Achard, a member of our editorial staff, was in London when last heard from. He is believed to be somewhere on the Continent, although we have been unable thus far to determine his exact location. We can promise for Dr. Achard a number of articles relative to the Continental aspects of the war.

Our other representative is Dr. N. S. Mayo, director of the veterinary department of the Abbott Alkaloidal Co. and secretary of the American Veterinary Medical Association. Doctor Mayo is now in London. He went to England the latter part of June to attend the International Veterinary Congress. We are depending upon Doctor Mayo to furnish us with a number of stories of English life and sentiment as affected by the great European war.

We also count among our friends a number of other able physicians who are in Europe at the present time. We shall hope to receive from some of these gentlemen, in due time, articles descriptive of their experiences. Our friends can depend upon us to give everything possible of special interest to physicians in connection with this unprecedented crisis. We are endeavoring to secure some special articles by experts upon the medical and sanitary aspects of the war.

Leading Articles

Macrotys Racemosa

A Useful American Remedy

By Finley Ellingwood, M. D., Chicago, Illinois

Editor of "Ellingwood's Therapeutist"; author of the "Treatment of Disease," and "Materia Medica, Therapeutics and Pharmacognosy."

EDITORIAL NOTE.—Next month we shall publish a paper from Doctor Ellingwood's pen upon "Painless Labor: How to Attain It." It promises to rival in interest the fine article upon Macrotys, presented herewith—and that is saying a good deal.

MACROTYS racemosa is the plant commonly known as black cohosh; it also bears the older botanical name of cimicifuga racemosa. The concentration is a resinous, slightly odorous powder of a dark-brown or brown color and a bitter, acrid taste. It possesses all the medicinal properties of the root, and in this differs from an alkaloid. Its dose, under ordinary circumstances, is from 1-2 to 3 grains (or even as high as 5 grains may be given), and is to be repeated several times. Of the fluid extract of the whole plant, from 5 to 30 minims are given. Of the tincture 30 minims, 1-2 dram.

In prescribing macrotys, the physiological action of the plant should be borne in mind. Some patients are much more susceptible to its action than others. That quantity which would be a proper dose for one woman would be found altogether too large for a susceptible person. The first symptom from excessive dosage as a rule is frontal headache, occasionally supraorbital. Later, there appears a general relaxation similar to that following heavy doses of the bromides, dimness of vision, dizziness, tremors, slowing of the pulse, while extreme prostration will follow marked overdoses.

This drug seems to act upon the vasomotor centers and the cardiac ganglion. The appearance of the characteristic headache, which soon assumes a bursting and tearing quality, together with injected conjunctivæ and flushed face, demands a suspension of the remedy. These phenomena will soon abate, as the remedy is quickly eliminated—as are most vegetable remedies.

I will say further concerning the action of this remedy that not alone upon the womb does it seem to exercise an influence similar to that of ergot, but equally so upon all unstriated muscle-fiber. I believe that its effect upon the arteries and arterioles, upon the veins and venous capillaries—in fact, upon the total capillary circulation—is similar to that of ergot. And especially is this true of the capillary circulation of the brain; the evidence of which is, the quickly engorged condition just mentioned, and which results in headache.

In addition to this influence, the remedy exercises a direct influence upon muscular fiber. I do not pretend to be able to describe this influence, but I have watched it for thirty-five years in every form of muscular trouble, and I am positive that, with close observation, better observers than I am will yet be able to determine a very exact but broad, satisfactory, and important influence upon conditions of the muscles for which we now have no specific remedies.

I have been especially pleased with the action of macrotys when combined with cactus or with cactus and gelsemium in the treatment of those conditions of the heart that often follow rheumatism or that occur from other causes in which there is flabbiness of the heart-muscles, dilatation, sluggish systole, and consequent impairment of the general capillary circulation. I accredit this largely to its action upon muscular fiber.

In many cases where I have decided to use cactus as a remedy for faults (weaknesses) of the heart-muscle, I have thought that I

have obtained a more speedy result by combining it with macrotys. I may say more of this action later on.

Its Great Value in Muscle Pains

For first specific indication for macrotys we have muscular faults. The first is, muscular soreness from any cause, either violent muscular exercise or from straining or from direct traumatism. One physician who had not ridden a horse for many years rode 40 miles at one stretch in haste, and with confidence in this remedy took 20 drops of a strong preparation (of course repeating the dose once), and he enjoyed an almost entire absence of soreness and felt no general discomfort whatever.

The first symptom is muscular aching. This may be local or general. There may be aching pains in the muscles from any cause—the sore, aching or strained condition of overworked muscles. Especially correct is this symptomatology concerning that form of muscular aching which is accompanied by chilliness, malaise, and increasing temperature.

Another indication is aching or lameness of the deep muscles of the back from any cause; especially if in conjunction with lameness or soreness in the lumbar region; there will be found a disordered condition of the kidneys. General backache in its various forms is more often relieved by macrotys, especially if it is combined with gelsemium, than by any other remedy in our materia medica. It is indeed a reliable remedy.

Macrotys With Gelsemium: A Happy Combination

Mentioning it in conjunction with gelsemium, I am reminded of the fact that the reader should know that there seems to be a peculiar harmony of action between these two remedies in a great many conditions. In most of these, both the muscular and nervous system is at fault, and, as these remedies are respectively the most specific remedies we have for these two conditions, they will be found to work harmoniously, reliably, quickly, and with very much satisfaction when correctly prescribed.

For many years I have depended upon these two remedies (macrotys with gelsemium) for lumbago and other forms of backache, as well as for sciatica, and especially for the various forms of tic. Hot applications in acute cases of these disorders and the persistent use of these two remedies, up to their full physiological action (cerebral fulness for macrotys, eyelid ptosis for gelsemium) will produce most excellent results.

Concerning the use of this class of remedies, I will digress a moment by saying that those physicians who have not had long experience with them are not likely to secure the full satisfying result that those obtain who have prescribed them a long time. This failure is altogether owing to the lack of confidence and of persistency. The prescriber must thoroughly believe that he will get results and then must prescribe with this confidence and push the remedy until the desired results are attained. A few cases carried through with this confidence and persistence will insure a faith that surely will bring results later on, far exceeding those formerly obtained from better-known measures.

Suppression of Urine

The most startling results I have obtained from the combination of gelsemium and macrotys was in the treatment of urinary suppression—a cessation of renal secretion. I have met—either in my own practice or in consultation with other physicians—with five cases of abrupt and almost complete suppression of urine from profound toxemic infection after confinement, occurring either immediately or within four or five days.

This in each case occurred without any evidence of inflammatory action or even elevation of temperature, at least at first. The extreme danger in a case like this is not, as a rule, appreciated. The fact that all at once the physician and his patient are brought to the edge of a horrible precipice, from which the patient is almost sure to be plunged, does not occur to the prescriber, unless he has had one or two previous fatal experiences. If, on the other hand, he has had such experiences, he will attack the situation with a sad lack of confidence, and often with a dread of the anticipated fatal ending. I have encountered only five such cases, as already said; but, as every one of these patients recovered most satisfactorily, not later, contracting kidney lesions, naturally I have become fixedly established in my confidence in the "bridge that has carried me over."

The same treatment was used in every instance. Persistent hot applications were made to the patient's back, over the kidneys. There was no cessation or let-up in these applications from the moment when they were first applied until there was a fair secretion of urine. In one case, this demanded 120 hours of consecutive heat; the recovery, however, justified the course. The patient

was kept under the full effect of my two remedies, macrotys and gelsemium, varying their dosage only as demanded by the undesirable appearance of their respective physiological action.

Besides those named, the careful prescriber will find other indications that must be met, inasmuch as these patients demand the closest watching; and this the more so, since in some of the very acute cases the patient will not even believe that she is seriously ill. Cerebral manifestations must appear or other violent symptoms, notably those of toxemia, before the friends can be convinced that the condition really is alarming; and these facts may materially interfere with the execution of the extreme measures the physician prescribes, they believing that his suggestions are unnecessarily severe.

In the treatment of acute inflammation of the kidneys from cold or other causes, in which there is more than a primary suppression (in which there is every pathological factor of an acute inflammation), the course here outlined is equally efficacious. There may be an exception to this in that form of suppression which occurs subsequent to the infection of scarlet-fever or diphtheria. There seems to be a difference in the developing pathology in this class of cases, which will demand other treatment besides this course, but detailing of which would perhaps be out of place here.

Febrile Conditions

Going back to the primary, first-named symptomatology attaching to the use of macrotys, this muscular aching in acute fevers is one of the very common premonitory symptoms. The raised temperature and the tendency to chills are not always present in the same relative proportion as the amount of aching. However, for this aching or muscular soreness, from 1 to 3 drops of the tincture of macrotys in a teaspoonful of water, given in conjunction with the prescribed remedy for the temperature, should be administered every hour or two.

Where the muscular complication is so great or arthritic inflammation seems to threaten, so that an acute muscular rheumatism or acute rheumatic arthritis is diagnosed, this remedy is always indicated. However, its effects are more prompt and more plainly apparent where the muscles are involved than where the structures of the joints alone are affected.

In acute rheumatic fever, it is more than likely that there is no one remedy that exercises so decidedly favorable an influence in its general action as does macrotys. It soon becomes popular with anyone who relies upon it.

It is more than likely that this influence, although in part owing to the direct selective action of the remedy upon the muscular structures, is greatly enhanced by the fact that this agent exerts a direct influence in overcoming lithemic conditions. Whenever such a condition exists in the system, more or less benefit can be obtained by prescribing macrotys. The uric acid diathesis seems to yield to this remedy in a large percentage of the cases.

Wherever muscular rheumatism exists, it should be antagonized with macrotys, whether this be in the walls of the chest, in the muscles of the neck, or the ache of the deep muscles of the back; in myalgia, in the extreme muscle stiffness induced by severe colds. In neuralgia from colds, in rheumatism, headaches, or in the intense muscular pains that in many women often precede the menses, this remedy can be depended upon.

Uterine Disorders and Pregnancy

The foregoing facts suggest the action of macrotys in the ordinary disorders of women such as dysmenorrhea (especially that of a congestive character), in amenorrhea, and in subinvolution. The latter condition follows a few days after confinement, in some cases where the patient has contracted a cold. There is slight chilliness, some temperature (usually not high), and stiffness, soreness, and general aching throughout the muscles of the thighs and those enveloping the entire pelvic area. There also may be an increased lochial discharge or the lochia may be suppressed.

I have overcome this entire train of symptoms by using a stimulating course of frequent doses of macrotys and by the application (every twenty-four to forty-eight hours) of a mild current of faradic electricity. It is surprising how beneficial faradism is in these cases, especially if after five or six weeks there has been no abatement in the condition or no improvement in the process of involution.

In the hysterical manifestations common at the menstrual period, muscular aching often is present, together with many of the phenomena that are symptomatic of the action of pulsatilla, especially if there should be amenorrhea. Under these circumstances, these two remedies (macrotys and pulsatilla) should be combined.

I have found a most desirable influence exercised by macrotys for conditions occurring during the pregnant term, where there were irregular pains, uterine distress, and inclination to fetid leucorrhea, in connection with a flabby condition of the muscular structures and the frequent occurrence of general aching as if from muscular atonicity.

The needed effect of macrotys is satisfactory at this time; but its most desirable influence is that which prepares the muscular structure of the patient for the ultimate expulsion of the child so efficaciously as to reduce very materially the painful evidence of muscular irritability in the expulsive effort. With the assistance of other simple remedies that may be indicated, it puts the entire machinery of expulsion into such a state of smooth running and efficiency, like the ball-bearings of some delicate machine, that all undue influence is done away with and the patient gives birth to the child in an exceedingly short time, with comparatively little pain—in fact, as I have stated in my article on the preparation of the mother for labor, in a number of cases with so little pain that the patient could not afterward recall that she had had any pain at all.

I consider this influence of these remedies among the most desirable of any of the remedies that I have prescribed, and I court criticism and careful comparative observation on the part of every intelligent physician in line with my own observations to determine how nearly correct I am in my conclusions. I believe that such comparative actions will not only prove my statements to be true, but will greatly enlarge the therapeutic field of these two excellent remedies.

Macrotys as a Parturient

Right here I desire to say a word for macrotys. I hardly can realize that under ordinary circumstances a physician would need any other *partus accelerator* than from 3 to 5 grains of macrotoid, repeated every hour or two, where there is suspension of labor-pains and muscular inactivity. This remedy has acted so beautifully for me and has accomplished so many desirable results for my contributors (*Ellingwood's Therapeutist*) that confidence has only been more firmly established.

As a matter of fact, macrotys produces a gradually increasing muscular power, which shows itself, however, with the increasing expulsive character of each pain, but with no disturbance of the perfect regularity of the pains. It is entirely devoid of the forceful, persistent, and often undesirable character of the expulsive pains induced by full doses of ergot or pituitrin.

Among my first confinements, nearly forty years ago, I had one patient who was suffering from powerful labor-pains, with almost no intermissions. I knew nothing of the indications at that time, but not being able to find any evidence of immediate expulsion of the child, I gave 5 grains of macrotoid, and repeated it in an hour. Instead of increasing the pains, which were at that time most undesirable, as there was no dilatation (as afterward discovered), the remedy removed every pain, and with the help of a warm bath produced a tranquility which greatly surprised me.

I soon convinced myself of the fact that the patient was not yet ready for labor and that a severe rheumatic condition of the entire muscular structure was present. This was overcome with proper treatment, and the confinement occurred two weeks later with none of these complications, and terminated favorably.

In Angina and Eclampsia

There are certain forms of angina pectoris in which macrotys is directly indicated, being in line with the statements I have already made upon its action upon the heart. I believe it is those forms of angina which result from rheumatic infection of the endocardium or pericardium or irregularities of the heart dependent upon muscular faults. There certainly are frequent cases of angina where four doses of macrotys, or of macrotys and gelsemium, or macrotys and hypodermics of lobelia will secure immediate relief, and, if given when subsequent attacks are anticipated, will greatly lengthen the intervals between attacks.

Another action of this remedy which is most reliable is in preventing eclampsia and in antagonizing those conditions that subsequently end in eclamptic seizures.

I have had the benefit, not alone in my own observations, but of those of Prof. E. J. Farnum, of Chicago, for many years, in watching the effect of macrotys, either alone or in combination with gelsemium, in this class of troubles. In many cases we have had every assurance that our patient was developing the nephritis of pregnancy, and a urinary analysis confirmed the diagnosis. In these cases, a very simple course, persisted in, of these two remedies, with the proper adjustment of nitrogenous foods and other dietary measures, has relieved the con-

dition, removed the symptoms and restored normal renal activity. So frequently has this occurred that we depend with confidence upon this simple combination.

If backaches and renal inactivity are pronounced, we make the hot applications across the back above referred to. If renal secretion is only slightly deficient, the patient is advised to sleep each night on a rubber water-bag, partly filled with hot water.

In one patient, where muscular twitching was pronounced and the sthenic headache was so severe, four months in advance of the anticipated labor, that convulsions seemed to be threatening at almost any time, with considerable albumin in the urine, this course did away with every evidence of the conditions in a little over a month, and left the patient in perfect health; while in two subsequent confinements it prevented the occurrence of any of the symptoms.

In Gonorrhea and Stricture

Another excellent use of macrotys, alone or with gelsemium, is in the treatment of acute gonorrhea. If immediately begun, injections may be avoided entirely. If the discharge has continued some days, injections of potassium permanganate, or irrigations, through a carefully introduced catheter, with 1 : 12,000 or 1 : 16,000 of mercury bichloride may be made once in two or three days, having the urethra cleaned before introducing the sterilized catheter.

Still another important service this remedy will render the prescriber is that of relaxing urethral or ureteral strictures. I have a history of cases where, because of acute gonorrhea, a catheter could not be passed even after chloroform had been administered, but where the administration of macrotys and gelsemium in very full doses has produced such satisfactory relaxation that in less than two hours there was spontaneous urination.

There are certain cases, also, of renal stone and gallstones where these two remedies can be given with great advantage, if operation is not demanded. I not only prescribe these two remedies in gonorrhea, but I have obtained excellent results from continuing their use during the early stages of gleet; and later, with the use of staphisagria or kava-kava, I have obtained complete cures.

To close this long article, I will say that the statement I made concerning confidence in the action of this remedy is necessary. In my early experience, not knowing its systematic action, I often failed to discover results, and I should have lost confidence in the remedy had it not been for the positive assertions of my confrères who by long experience had learned its desirable properties. One physician told me a few days ago that this was one of the remedies that he absolutely could not spare from his case if he practiced medicine.

I would further reiterate my belief in the fact that macrotoid will exercise all the influences of any good fluid preparation I have used, if given persistently in carefully adjusted and frequently repeated doses. Let it be further borne in mind that the preceding suggestions do not exhaust the field of this valuable remedy, by any means.

EVERYTHING that has been done well has been done calmly. Many things that have been done poorly owe their failure to the haste, or lack of calmness, with which they were performed. This peace of mind which helps to win battles is a habit that can be formed by those who are willing to cultivate the tendency to forget rather than fret about trivial mishaps. It is a fact that many people who are strong in meeting great emergencies lose control over themselves as soon as little things go wrong.—JOHN R. MEADER.

Observations Over Seas

Brief Records of a European Trip

By Henry B. Hollen, M. D., Chicago, Illinois

EDITORIAL NOTE.—Doctor Hollen made his trip abroad in the winter and spring of 1914, returning to this country some weeks before the breaking out of the war. In view of recent developments his observations are of special interest, since they give an intimate picture of some phases of the European life now passing. As to the Europe of next year, that is "in the lap of the gods."

LAST month I returned from Europe, and it occurred to me that some of the readers of this periodical might like to hear, or, rather, read, about some of the observations I made over there, since they may be helpful to prospective transatlantic travelers.

I did not go to study, as many of my profession do. I was on pleasure bent, in the main; still, as I went I gathered material for two books, now in the incipient stage, along sex lines. What I write here, therefore, will be a sort of a series of travel notes, diverse and disjointed, while, yet, related more or less closely to medicine.

I was gone nearly five months, and in that time I covered about as much ground as one can comfortably cover, that is, about half of Europe; and at the start let me advise the prospective traveler not to go to Europe unless he can spend at least five months there. It is a mistake to do otherwise; for it means hurry, fatigue, mental confusion, and regret when it is all over. A trip abroad is, for most people, the one and only such trip; it is not repeated, as a rule. Only those of ample means can indulge in several transatlantic journies. On this account, one should try to make the most of the single opportunity, planning to stay just as long a time as possible.

Travel is not enjoyable nor profitable unless one travels leisurely. Deliver me from a flying-trip! I have seen many a victim of the tourist-agent doing Europe in six weeks. They always were a wretched, perspiring, and weary-limbed lot. No wonder they have become material for the comic papers. My advice applies still more strongly, of course, to those who go to one of the medical centers to study; all such should go for not less than a whole year.

The Expense of Living Abroad

Aside from the greater comfort and enjoyment derived, a long stay is relatively the cheaper, as one can take advantage of hotel rates or else rent a small apartment and arrange for light housekeeping; the latter being the most economical.

On several occasions, I fell in with doctors returning from postgraduate work at Berlin or Vienna. One of them was accompanied by his wife and son. They had rented a furnished flat of four rooms and lived in it a whole year, as they said, comfortably and inexpensively. Such accommodations are especially plentiful in Berlin. This doctor told me that help was very cheap, also; for two dollars a week they hired a domestic who did the cooking and did practically all the housework. Table-supplies cost just about the same as they do here in our country.

Living in hotels is somewhat cheaper than here, but one must pay in the neighborhood of two dollars a day for a desirable room, with three good meals. In Switzerland, it is possible to live for a little less; so also in Holland.

My experience taught me that the boarding-houses ("pensions," they call them), as you find them abroad, are impossible for people accustomed to good living. I tried them in three places—once in Nice, once in Paris, and once in Brussels—however, the longest I was able to "stick it out" in any one of them was three days. In the conventional guide-book, these pensions of Europe are recommended to those who cannot afford a big outlay; but they are very much overrated. One night's lodging and breakfast generally is enough to convince any deluded American venturer that they are not for him.

European Travel Is Not Cheap

Very recently I saw in one of the magazines an article contributed by a lady on how to see Europe on a dollar a day. It certainly was funny to me who knew better. It would not be funny at all, though, to the traveler deceived by her into going abroad with scant funds based on her advice. To find yourself short of money among strangers, thousands of miles from home—to be obliged to scrimp or ask charity—that is mighty

embarrassing. The lady who wrote that article regarding the all-sufficiency of a dollar was either working in behalf of the transportation companies, or she was one of those who love to lie, or she was so unaccustomed to the good things of life that the steerage actually seemed pleasant, by contrast.

This shows how little one can rely on what he reads, as also does the next incident. Before going over, I read a travel-book, in which the statement was made that a franc in the south of France would go as far as a dollar in America. This is a ridiculous statement. Living is very expensive in that part of France, and, counting everything, is fully as costly as in the cosmopolitan resorting places in our own country. For, owing to its mild winters and healthful climate, the whole of the Mediterranean coast (the Riviera) is one big resort to which the fashionable folk flock from the four quarters of Europe, and, in fact, from all over the world. It is a land of regal hotels, of fine shops, of sumptuous "kursaals;" and with a winter population in search of pleasure, with scant regard for the cost. Consequently, the sojourner here must expect to pay dearly for all he gets. His laundress will demand an extravagant price for her work; the tailor will ask a dollar for simply pressing his suit. Little or nothing is cheap.

Troubles of Two American Girls

Into my little hotel in Paris, on the Rue D'Antin, one evening, just after dinner, came two American girls. They looked tired—and lonesome—and bewildered. They said they had just arrived that morning. They were from Cleveland. They knew nothing of the French language nor of the value of the Gallic coins in their purses. They had walked for hours looking for a hotel. But everywhere they went the price demanded was more than they could afford to pay; it was clear, from their talk as well as appearance, that these two had but modest means.

Almost tearfully and deploringly they now inquired of the concièrge whether they might have a room for a dollar a day. The concièrge would see—he could speak some English. Yes, the manager had a small room which he would let at that rate, if they would remain at least eight days. Poor girls! They had a tale of woe to tell.

They had conceived the idea of a short vacation abroad. It would not cost much, they were told. The tourist agent to whom they went, confirmed this. They might go third-class on the line he represented, he suggested. The accommodations were just as good as second-class on most boats. He assured them that the voyage across would be very pleasant. They bought tickets and started away. When they got on board they found that third-class was really steerage. It looked awful. They could not think of crossing the Atlantic in such quarters and in such company—a low class of foreigners. They saw the purser and bought a second-class cabin, paying a considerable difference. The result was that these two inexperienced girls landed at Cherbourg with depleted purses, making it necessary for them to husband their remaining resources. Luckily, they had relatives in England, to whom they finally decided to appeal for money.

This is only one case that came to my notice of people tripping to Europe, with the idea that trip-making is cheap there. But this thing happens every day. The lesson to be learned is this: Have plenty of money with you when going abroad, and have it in readily convertible form. A fair estimate of the total expense would be not less than five dollars a day for each person while traveling on land, and ten dollars while traveling on water.

The Trip Across the Water

I was two weeks crossing—by the southern route. I chose the Fabre Line and can recommend this line above all others. Two fine new boats are in service between New York and Marseilles; and the passage rate is somewhat less than that of the larger and more extensively advertised steamship companies. Being a French boat, the cuisine, of course, is French; and excellent. They give their patrons more than enough to eat; and more than enough to drink. Wine is gratis; a bottle of red wine and one of white wine are to be found on every table.

On board, I met Doctor Darcy, from Brockton, Massachusetts. The Doctor proved to be a good companion, although he was occupied part of the time with a patient—neurasthenic—whom he was taking to Nice. He and I played shuttleboard on deck; exchanged novels; and fraternalized occasionally, before dinner, over a glass of Dubonnet. And we saw Algiers together—the old Arab quarter—the mosques—the Soudanese dancing-girls—and all the rest of the sights in this strange and bizarre country. Neither of us shall ever forget those days.

And this reminds me: The pleasures of travel do not actually cease at the journey's end. The memory of those experiences always lives. You can conjure up mind-pictures of your trip years afterward as, perhaps, when you are reading some book, which describes scenes familiar to you. You have been over that same ground—you have walked the same streets—you have eaten at the same interesting café which you find named in this book.

My Visit to Nice

My final destination was Nice, and there I was to remain for sixty days at least, or till the north was fairly out of the grip of winter. Nice is a charming place, with its snow-capped mountains back of it and the beautiful blue Mediterranean skirted by the celebrated Promenade des Anglais—a stretch of five miles—one of the most interesting walks in the whole world when seen in the middle of any sunny afternoon. And it usually is sunny in Nice. Here, is a medley of races, all in the happiest frame of mind, glad to disport themselves for awhile in this favored land.

At the hotel which I selected, I met a Doctor Cunningham. He hailed from New York. He was not in active practice, he said. Some years before, he abandoned medicine, as so many do, and went into music. He had made himself a great favorite in concert and oratorio work. One year he toured with Patti. The Doctor was here to recuperate. He contracted bronchitis last fall, which persisted, so that he finally decided to cancel his dates and seek a favoring clime. When I first saw him he was hoarse, but he made surprising progress. Before I left he virtually had regained his singing-voice.

Those who suffer from bronchial troubles do well here, as also do neurasthenics. The warm and bounteous sunlight seems to work wonders. The sea air helps, as does the leisure which is so easy to indulge in here. The Riviera is the land of idlers. Many an hour have I spent on the Quai Midi (the east end of the promenade), doing nothing more laborious than listening to what the wild waves were saying. Still, who will say that these hours were altogether empty. For there is reward in the ozone-laden air and the glorious sunlight; and there is something more and better, in the world than the coining of dollars and cents. Not a few victims of tuberculosis find their way here from the north; some are benefited to a decided degree. But I fancy that these victims do better in the more altitudinous districts of Switzerland.

Doctor Cunningham was accompanied by his wife, a charming little woman, while Mrs. Hollen soon joined me from London; so, the four of us made a most congenial quartette, especially since the Doctor had been schooled in Chicago and knew the medical center of the West Side, so familiar to me. We took long walks along picturesque country roads; we frequented the Casino Municipale and occasionally risked a few francs at the gaming-tables; and once we motored over the Alps into Italy. In many other ways, we enjoyed the holiday together. We went on shopping-expeditions—to the special delight, I need not mention, of the women. And we took part in the Battle of Flowers, that pretty fête of the azure coast.

A Drugstore Experience

I remember finding the Doctor peeved, one morning, over a petty extortion, such as shopkeepers and others are wont to practice on travelers. He had gone to a nearby drug-store for some aspirin and witchhazel. The druggist charged him 4 francs (80 cents) for a 4-ounce bottle of witchhazel and 5 cents apiece for 5-grain aspirin capsules. This was not all. For, when he spied some weighing-scales after making these purchases, he got on, and was charged 10 centimes (2 cents) for using them. This seemed pretty small—especially after he had just bought and paid exorbitantly for what he got. He said as much to the druggist, but that gentlemen appeared only surprised and hurt—and continued courteous.

The French are always courteous. I have even known a lordly hotel-keeper to ask a departing guest for 2 cents, to cover the government tax on the receipt—a guest who had just paid him 16 dollars in the coin of the realm—and he didn't feel a bit abashed. On another occasion, I was charged, on my bill, 2 cents apiece for extra rolls requested at breakfast on three consecutive mornings.

To us, this small, calculating way of the French is not at all likeable. But it is a national and a natural, trait. It is frugality carried almost to the point of meanness. Dislike the French for it, if you will—they have other traits which you are bound to admire; to-wit: their unfailing courtesy, their artistic sense, and their frankness in dealing with matters of sex. There is not an atom of sex-hypocrisy in their makeup; no prudes among them.

When in Paris, in the Garden of the Tuilleries, I saw nude figures in stone and

marble, which, if set down in a park or square in our country, would at once awaken a howl from our "decent" masses and a thousand blushes of shame. Yet, here in France, the virgin damsel passes these things every day and children romp in plain sight of them. But no one is shocked. And when the Frenchman wants his absinthe he does not sneak into a bar-room and then emerge with a guilty face. No! He takes it in the open, on the crowded boulevard, where all who pass may see.

The untraveled American often is amusing when he lays bare his conception of the rest of the world. I talked with one soon after my return.

"Train service is awfully poor in Europe, isn't it?" he asked.

He didn't know he was displaying ignorance. He has hardly been out of the middle West and he believes the foreign world benighted—backward—lacking the good things of life.

I told him that, on the contrary, traveling in Europe was just as cheap as in this country and very much more comfortable. This was true. But it surprised him.

The next question he asked was: "I suppose you found France very immoral, didn't you?"

My reply to that was even less expected. I told him there was less immorality in France than in America, and less venereal disease. This is true also. And, why not? The authorities regard the commodity of the prostitute as a necessary one. They allow her to deal in this commodity with certain restrictions. She is constantly under police and medical supervision. If one of her kind becomes diseased she is hurried into quarantine, there to remain till she is no longer a public menace. She who tries to conceal her condition and persists in soliciting is penalized. She may take chances, but more likely she will consider it easier and safer to cross the channel and walk on Regent Street.

But enough of this; my data along this line, as well as my experiences in different places, I have written into a book that is essentially a comparative study of the prostitute as found in the various parts of the world.

In Switzerland and Holland

Switzerland is a bright spot on the map of Europe. We stopped a week in Lausanne—a clean and well-ordered city on Lake Geneva—spread over foothills of the Alps—the ravines spanned by handsome cement bridges, maintaining the continuity of its principal streets. It is a city of good schools, and students from near and remote countries are here; you see them everywhere in little groups, wearing velvet caps of many colors. There is a fine hospital here which I looked through. Some world-famed doctors practice and teach here, among them Combé, who was a leader up to the time of his recent demise. His translated works are familiar to us.

There is much to interest the traveler in Holland, such as the green pastures below the sea's level, with their grazing cattle, the canals (the dykes), the windmills, and, in season, that veritable feast for the eyes, the tulip-fields, one after another, each a solid color, red, white or yellow. We made our headquarters at The Hague, the capital. It is a very attractive city, a place where one is tempted to linger. Only thirty minutes away by train, through a wooded stretch, is that celebrated Dutch watering-place Scheveningen, where is a sandy beach that is surpassed by none. From The Hague it is easy to reach the smaller cities, such as Delft (twenty minutes by train), while Amsterdam is only an hour away. But Amsterdam is an ugly commercial city, with little in it to hold the visitor. In the opposite direction, about the same distance away, is Rotterdam—interesting as a port, where may be seen the unloading of many and often strange cargoes.

To the smoker, Holland is a paradise, at least in this regard: tobacco is good and cheap; three cents in our money will buy a good cigar. And the coffee-drinker—he will find here genuine Java, brewed as it should be brewed. And he who loves gin will be satisfied as never before; the world's best is Holland gin.

In the capital city, at the Mauritshuis, I saw Rembrandt's picture titled "A Class in Anatomy." The original is a very large and striking canvas; small prints of it are to be found in many a doctor's office.

A Week in London

From Rotterdam to London is a night's ride by boat. What an impossible people the English! A week among them was quite enough for me. Cold, hypocritical, disdainful to the point of rudeness when he is traveling, is the male. Frumpy, lanky, ruddy-faced, big-footed is the female. It astonished me to find the English woman so neglectful of her person, as compared with her sister across the channel. She is exceedingly unattractive. But if she suits the Englishman, I suppose there should be no complaint from

others. John Bull must be rather easily satisfied. Perhaps he figures that anything English is better than the best of any other blood, in the way of femininity.

The gentry of England really are a simple lot. I looked upon a London street crowd on a holiday. There they were, thousands of them, engaging in cheap fun, amusing themselves with penny toys purchased from sidewalk venders, garnished with paper flowers; such an anemic and poorly dressed populace, comprising presumably a good many clerks delighting in a day's freedom from office drudgery at four pounds a month.

And how these simple-minded folk do grovel to titledom; really, it is nausea-provoking. The goings and comings of royalty, the doings of lords and ladies; such appears to be their bread of life. They devour it daily, the newspapers devoting a large part of their space to chronicling the movements of the nobility.

This inordinate worship of its nobility by the gentry of England is apparent at every turn. You see it in commercial life. The chemist on Fleet Street who once upon a time sold a box of liver-pills to the Duke of Manchester, who in turn gave a dose of said pills to the King when on a certain occasion he was looking very sallow, that chemist makes business capital of this transaction. Henceforth he announces himself as "Pharmacist by special warrant to the King of England and to the Duke of Manchester," and puts the royal coat-of-arms over his door. So, also, the promoter of fake stocks finds it easy to dispose of them to the worshipful public, when he picks one of the nobility for an officer in his company and secures an assortment of noble endorsements.

We often deplore the gullibility of our American public; but, for plain, unvarnished gullibility, the English have us beat. Our American rube is a very sophisticated gentleman as compared with the English yokel. That is why rascals who play themselves out here can cross over there and go right on doing business. Nowhere else do patent medicines take so well and sell so well as there—in Old England.

I found that, on the Continent at least, the use of acetanilid had been almost abandoned as a painkiller or anodyne. A new popular anodyne is pyramidin. This prescription was given to me by a doctor friend in Milan: Phenacetin, grs. 4; caffeine, grs. 2; pyramidin, grs. 4. This is said to be very effective for headache. It is commonly dispensed by druggists in wafers.

On the return trip, by the American line, the ship's doctor was very good company. He had spent a dozen years on the sea in this capacity, and he was extremely efficient in handling all the ailments that turn up on board ship. For seasickness, he pinned his faith on veronal.

[We print Doctor Hollen's criticism of the English with misgivings. We wish to avoid international complications right now! Fortunately he made no comments on Germany! Needless to say, his opinions are not our own. To try to give an accurate picture of English life and character after a week in London seems as difficult as it would be to write a satisfactory book about America after ten days exclusively on Broadway. However, the doctor's English impressions are interesting.—Ed.]

THE BRAVEST BATTLE

By Joaquin Miller

The bravest battle that ever was fought;
Shall I tell you where and when?
On the nap of the world you will find it not;
It was fought by the mothers of men.

Nay, not with cannon or battle shot,
With sword or nobler pen;
Nay, not with eloquent word or thought,
From mouths of wonderful men.

But deep in a walled-up woman's heart—
Of woman that would not yield;
But patiently, silently bore her part—
Lo there is that battlefield.

No marshaling troop, no bivouac song;
No banner to gleam and wave;
And oh! these battles, they last so long—
From babyhood to the grave.

Yet, faithful still as a bridge of stars,
She fights in her walled-up town—
Fights on and on in the endless wars,
Then silent, unseen, goes down.

A Study of Aconitine

Its Physiologic Action and Therapeutic Value

By H. Hamilton Redfield, A. B., M. D., Chicago, Illinois

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EDITORIAL NOTE.—Doctor Redfield has promised us a number of his inimitable drug studies. Next month, for instance, we hope to be able to present a paper upon atropine, now preparing. He will give special attention to the alkaloids and other active principles. These contributions will be found essentially practical, and they are based upon an extensive clinical experience.

IN 1833, Geiger and Hesse, while making a study of the chemistry of aconitum napellus, succeeded in isolating a crystallizable alkaloid to which they gave the name aconitine, and which for a considerable length of time was accepted as the only alkaloid present in the plant. However, later research has brought to light the existence of two other alkaloids, named, respectively, aconine and benzaconine. Both of these substances can be made by hydrolyzing aconitine; benzaconine being the isaconitine, and the chief constituent of napelline and of picraconitine, as mentioned by Cash and Dunstan.

Aconitine occurs in the form of colorless or whitish, odorless rhombic plates, or prisms. It is soluble both in hot and in cold water. It is strongly alkaline to reddened litmus, neutralizing acids, and is precipitated from the latter by caustic alkalis, but not by carbonate of ammonium or the bicarbonates of sodium or potassium. It is colored orange-yellow by sulphuric acid, changing to brown and finally becoming colorless. Its solution in diluted phosphoric acid, when carefully evaporated, becomes violet-colored; mixed with sugar, it becomes rose-red in the presence of sulphuric acid.

Physiological Action

Ingested in small doses, aconitine gives rise to a sense of numbness or tingling in the tip of the tongue and the lips, which in some cases, where a susceptibility to the action of the alkaloid exists, may extend to the ends of the fingers and toes, the pillars of the fauces, and the throat; or there may occur a general sense of formication. After increased doses, there is muscular weakness and depression, with intensification of all the aforementioned symptoms; the pulse becomes weak and slow and the respiratory movements are markedly decreased.

Given in toxic doses, there is, in addition to the above manifestations, pain in the joints, vertigo, dimness of vision, marked debility, slow, weak pulse (40 to 50 beats per minute), cold, clammy skin, a sense of heat in the stomach, nausea, vomiting, and purging. Gastric and intestinal spasms may occur, headache, blindness, dilated pupils, general anesthesia, and muscular paralysis. If death supervenes, it is the result of carbon-monoxide narcosis, due to the paralyzing action of the drug on the respiratory center in the medulla and the muscles of respiration.

Aconitine can be classed as an exceedingly powerful respiratory, cardiac, sensory, and spinal depressant; a diaphoretic, diuretic, and antipyretic. Its action seems to be chiefly exerted upon the peripheral ends of the sensory nerves, but it also exercises a paralyzing action upon the motor nerves. However, the sensory nerves are the first to come under the influence of the alkaloid, and this action proceeds from the periphery inward; and it is not until the induced paralysis has traversed the sensory nerve and reached the center (which also participates in the paralysis) that we see any evidences of motor paralysis, the drug eventually producing complete loss of sensation (paralysis of the sensory side of the arc) and abolition of function (paralysis, reflexly, of the motor side of the arc). Section of the sensory nerves in rabbits has been followed by a loss of sensation or motor paralysis when crystalline aconitine was applied over the area supplied by the severed nerves.

Under the stimulating action of aconitine upon the cardioinhibitory center, the heart is slowed and steadied, the action in this instance being slightly like that of digitalin, that is, a decrease in the rate of the heartbeat.

A Comparison of Aconitine and Digitalin

A close comparison of the physiological action of the two principles named (aconitine and digitalin) will, however, show some very marked dissimilarities.

Aconitine first stimulates, but later relaxes inhibition and depresses the cardiac apparatus. Digitalin relaxes inhibition and stimulates the cardiac muscle. Aconitine paralyzes the

heart by direct depression. Digitalin paralyzes the heart by overstimulation. Aconitine arrests the heart in diastole. Digitalin arrests the heart in systole. Aconitine lowers arterial tension. Digitalin raises arterial tension. Aconitine acts very rapidly. Digitalin acts very slowly—a fact which makes it of little value in the role of an antagonist in cases of aconitine poisoning.

Both slow the heart; otherwise they antagonize each other.

In therapeutic doses, aconitine exerts an inhibitory action upon the respiratory center, resulting in a slowing of the respiratory movements, which may become labored and dyspneic. By some observers these conditions have been ascribed to a bronchoconstriction, owing to stimulation of the vagus endings in the lungs; but, the death from asphyxia caused by aconitine would point to a more complex action or to a concomitant depressant action upon the respiratory center as well.

On the nervous-system, aside from the action on the centers in the medulla and the sensory and motor nerves, aconitine does not seem to possess any important influence upon the central nervous system. The convulsions sometimes witnessed in cases of poisoning by this drug in all probability result from the asphyxiatic phenomena.

The question as to whether or not aconitine exerts any influence over the secretions, through any stimulation or inhibition of the nerve-trunks of the secretory nerves supplying the secretory glands or of the terminal fibers in the glands, is open to debate. The excessive flow of mucus and saliva following the inhalation of the powdered alkaloid into the nose no doubt is caused by the stimulation of the terminal fibers of the sensory nerves in the mucous membrane of the nose (the nictitating membrane) and is purely a reflex phenomenon. The excessive perspiration seen in toxic cases is the result of collapse.

The evidence regarding the action of aconitine upon the muscular structure is thoroughly unsatisfactory and contradictory. Wieland, Bucheim, and Eisenmenger affirm emphatically that the muscle curve is greatly influenced by aconitine, while with equal emphasis and certainty Murray, Boehm, and Waitman assert that aconitine does not increase the height of the muscle curve; as is shown by the myographic tracings.

Cash and Dunstan demonstrated that aconitine does not increase the irritability of muscles nor the capacity for work; the length of time necessary to induce fatigue in a muscle not being shortened when the muscle was impregnated with aconitine.

Aconitine Acts Through the Vagus

Considered from a physiological standpoint, the dominant action of aconitine upon the circulation is through the medium of the vagus. In therapeutic doses, it slows the pulse, lowers blood pressure, and causes a decrease in the heart's output per unit of time. This action, resulting from stimulation of the inhibitory medullary centers, can be prevented by section of the vagus (rabbit) or by the application of atropine.

In toxic doses, there is an acceleration of the cardiac action, extreme auriculoventricular arhythmia, and eventually delirium cordis, as the effects are observed even after section of the vagi, and, also, in isolated hearts there is presumptive evidence sufficient to warrant a hypothesis that the alkaloid must exert an action upon the heart-muscle itself.

Under aconitine, there is a marked fall in body-temperature, the regulating action of the drug upon the vasomotor mechanism making for a more equable distribution of blood in the circulatory system, an increase in heat radiation, the reductions of zones of hyperemia, by equalizing circulation, by regulating respiration and thereby bringing to a more normal condition the tidal air, and also perhaps by an action on the thermogenic centers in the cord.

While aconitine exerts a marked action upon the entire nervous system and quiets excited muscular action due to nervous excitement, it has an especial selective action upon the fifth nerve and its branches.

Toxicology of Aconitine

The primary toxic manifestation of aconitine is the characteristic tingling which it produces, first in the tip of the tongue and in the lips, later in the pillars of the fauces, in the fingers and toes, and finally in the entire body. Accompanying this is excessive salivation, nausea, vomiting, and purging. The pulse becomes rapid, weak, and irregular. The breathing is slow and labored, the skin feels cold and clammy. In most cases, the mind remains clear until the end, death resulting from carbon-monoxide narcosis, brought about by a paralysis of the respiratory center.

The treatment of aconitine poisoning consists in maintaining the body temperature, and keeping the patient in a recumbent position in order to avoid sudden heart failure through extra work being thrown upon

the markedly depressed organ or by gravitation of blood to the excessively dilated blood-vessels in the splanchnic area, and a resultant cerebral anemia. Sustain the heart with digitalin, cactus, adonidin or strophanthin. Digitalin, while physiologically indicated, acts too slowly to admit of its being used in cases where immediate action is required; hence, the preference should be given to the more powerful and quick-acting adonidin. Atropine is exceedingly useful in conjunction with other remedies, and in extreme cases sparteine and caffeine are useful.

Empty the stomach by giving a hypodermic injection of apomorphine, washing the viscus out repeatedly, to prevent reabsorption of the alkaloid; give tannic acid in solution freely, this combining with the aconitine as an insoluble tannate, and thus prevents reabsorption. As an extreme measure, Sylvester's method of artificial respiration may be resorted to.

Therapeutics of Aconitine

Aconitine is the indicated remedy in the early stages of the acute synochial and rheumatic fevers. This is especially true if these conditions arise as a result of sudden atmospheric changes; a sudden transition from warm to cold weather or during windy weather. The onset is sudden, the pulse is small, quick and hard, temperature is elevated, chilliness is felt up and down the spine, there is sudden suppression of the secretions, the skin feels hot and dry.

Aconitine is also called for in those cases in which the pulse is full, bounding, and sharp; in the initial stages of the acute inflammatory conditions (of any organ), and at the onset of any of the protracted fevers, especially those of the exanthematous kind.

While aconitine is essentially the indicated remedy in sthenic fevers, yet it must not be overlooked in conditions presenting the opposite condition—asthenia. The pulse here is small, feeble, frequent, wiry, and sometimes corded. Here, in conjunction with adonidin or digitalin, and strychnine arsenate, it is the antipyretic *par excellence*.

In the onset of the local inflammatory diseases of the mucous membranes, associated with suppression of the secretions of the membranes or a preversion of the secretions, aconitine will be found an agent of sterling worth. Such conditions are seen in laryngitis, bronchitis, tonsillitis, gastritis, colitis, enteritis, and especially in cases of cholera infantum.

It relieves vertigo when there is in the brain a sensation of swaying to and fro, and which is intensified by stooping and motion. In general, frequently there is an accompanying headache of a bursting nature.

Aconitine is especially efficacious in the fevers of children. These little patients are susceptible to very small doses of the alkaloid; and these should be given in short intervals. In spite of the powerful toxic action of aconitine, no apprehension need be felt for the safety of the little patient if the rule as promulgated by Dr. John M. Shaller of Denver is adhered to. In substance this rule is:

Shaller's Aconitine Rule

Take 1 granule of aconitine hydrobromide, of 1-800 grain, for each year of the child's age, and 1 additional granule; dissolve these in 24 teaspoonfuls of water, and give of this a teaspoonful as required.

For example: For a child 5 years of age, take 6 granules (5 plus 1), dissolve in 24 teaspoonfuls of water, and give a teaspoonful every fifteen minutes until defervescence is established, and thereafter just often enough to maintain the effect.

I have found that children *under one year* of age may be given the solution indicated for a child one year of age, i. e., 2 granules in 24 teaspoonfuls of water. No apprehension need ever be felt for the safety of the patient when aconitine is administered according to this rule.

As soon as the sedative influence of the drug manifests itself, the skin becomes moist, the temperature falls, the restlessness abates, and it is then that the interval between doses should be lengthened, until at last there no longer remain any indications justifying the continuance of the drug. In the majority of cases of simple fever, there will ensue a complete cessation of all symptoms within twelve hours, and many cases will be aborted before a diagnosis is possible.

In any and all conditions showing capillary engorgement, aconitine, by promoting tone and power of the arterial capillaries and opposing stasis of the blood, is an excellent agent. Here its influence is enhanced by atropine, the two alkaloids working in perfect harmony in all of the incipient inflammations. In any case of capillary engorgement, their combined action is most happy and leaves nothing to be desired.

It is possible that at the onset of an acute inflammatory condition the synthetic cardiac depressants will stay the fever as effectively as would aconitine; but as to the inflamma

tory process itself they fall far short of the beneficial influence exercised by aconitine, and in the presence of inflammation they are powerless to check its progress or to prevent its results.

To the contrary, aconitine retards exudation, suppuration, adhesion, induration, and hypertrophy, properties which cannot truthfully be delegated to any other agent. Antagonize inflammation, inflammatory processes or their results it certainly does; a condition easily understood when we recall the characteristic action it exerts upon the capillary circulation. It hastens resolution and promotes the rapid absorption of inflammatory products.

In Cerebral Congestions

In the treatment of acute congestions or inflammation of brain, cord or their meninges, aconitine exercises a double influence in the early stages; i. e., it equalizes circulation and quiets the excitation of the nervous system: and, while the specific symptomatology of gelseminine is more clearly marked, and it should *per se* be the remedy of choice, yet, far better and quicker results will be obtained if gelseminine be combined with aconitine during the stage of excitation; relaxation in spinal meningitis would *a priori* contraindicate both remedies.

Possessing, as it does, a selective action on the fifth nerve, it is especially indicated in the neuralgias of this nerve or its ramifications.

The sedating and regulating action of aconitine on the respiratory center makes it of high importance in the treatment of the pneumonias, where the embarrassed respiration offers one of the cardinal indications for its use. Here also its power to relieve capillary congestion is to be desired, and in typical cases, during the initial days, the symptomatology of aconitine is so marked as to preclude any remote possibility of its nonexhibition.

Given a case of any of the pneumonias at the onset, and the combination of aconitine and veratrine (not overlooking such valuable adjuncts as bryonin, calcium sulphide, and calx iodata), and the pain in respiration, capillary stasis, and temperature are quickly brought under control.

It allays the irritation of bronchitis, promotes and restores secretions (by equalizing circulation) and, by exerting its paralyzing action on the peripheral nerve filaments, quickly soothes the irritable and inflamed condition of the mucous membranes.

At the onset of pleurisy, its indications are patent, and, if given in these cases in combination with bryonin and asclepedin, its influence is enhanced, the chilliness, lacinating pain on inspiration, cough, and dry skin, all disappear as if by magic and the patient becomes restful and easy. Here, as in the treatment of pneumonia, it should be discontinued as soon as defervescence is established, and late in the disease a trio of digitalin, strychnine, and bryonin, with asclepedin and calx iodata, is more effective.

In the treatment of mucous and serous inflammations, it is of great benefit; a matter strongly evidenced in such conditions as acute enteritis or peritonitis; whether local or diffused, idiopathic, traumatic or septic, aconitine, is an absolutely indicated remedy, and should be continued during the sthenic stage; also in gastritis, appendicitis, and hepatitis; and in acute nephritis, cystitis (in combination with arbutin) and urethritis (with anemonin), specific or nonspecific.

The exhibition of aconitine in the onset of acute rheumatic attacks should be a matter of routine with the physician. It produces prompt defervescence, mitigates the pain and swelling of the parts, and prevents the occurrence of organic heart lesions or diseases so frequently met with as sequals of the acute rheumatic conditions. Here, as in other cited conditions, its value is enhanced by combination with such indicated remedies as macrotoid, boldine, bryonin, rhus toxicodendron or collinsonoid.

In acute gastritis, gastric fever, and acute enteritis, the conditions call for the exhibition of aconitine, and it is a valuable agent in the treatment of these conditions. Here, as in the diseases of the throat, its influence is due —to a lesser extent, however—to its local as well as general influence. In the inflammatory stage of dysentery, and in cholera infantum, minimum doses of emetine, copper arsenite, and aconitine exercise a curative and specific action after the causes are removed and intestinal antisepsis is secured.

In the treatment of acute mastitis, aconitine finds a place of note. Seen early and handled with aconitine and phytolacca, a few doses will cause an abatement of the symptoms; which is most gratifying to patient and physician alike.

Women who suffer from a suppression of the menstrual flow, the causative factor being exposure to cold, or wet feet, or cold baths, derive prompt relief from aconitine. Its action in these cases is invariable, and is enhanced by combination with such remedies

as anemonin, bryonin, macrotys, or gelseminine.

Aconitine in the Exanthemata

In the exanthematous diseases, aconitine is invariably indicated, by reason of its action on the capillary circulation and skin. It aids in bringing out the eruption and promotes exfoliation. Excessive temperature is controlled, and in measles especially it should always be remembered by reason of its power to prevent a catarrhal pneumonia—a not too infrequent sequel. Cases of scarlet-fever and measles treated from the onset with aconitine go on to a speedy and uneventful convalescence, devoid of any of the so often accompanying nephritic, pneumonic or cardiac complications.

In the acute inflammatory diseases of the eye, aconitine is of service. The eye is extremely painful, sensitive to light, and the eyeball feels too large. In catarrhal inflammations of the eye prior to exudation, it is of service; there is excruciating pain and the patient is extremely restless. In acute attacks of granular lids and in pannus of the cornea, it is of assistance.

Following confinement, aconitine may be indicated for milk-fever. The mammary glands are hot, hard, and tense; fever is high; or there may be a suppression of the lochia, with high fever, hot, dry skin and hard, rapid pulse.

Surgical fever is promptly and effectively met with aconitine; it is especially useful in preventing chill after the passage of the urethral sound or catheter.

Erysipelas faciei is promptly controlled by aconitine; and, when the attacks are in sthenic patients, this drug, in combination with pilocarpine to full physiological effect, proves curative, while in asthenic cases it acts excellently in conjunction with tincture of ferric chloride.

Specific Indications

The specific indications for the therapeutic use of aconitine may be summarized as follows:

Pulse small, hard, and quick; dry, hot skin; rising temperature; secretions suddenly suppressed; chilliness along the spine; onset sudden; great anxiety on the part of the patient.

Why Not Hawaii?

A Vacation Suggestion

By E. S. Goodhue, M. D., LL. D., Holualoa, Hawaii

EDITORIAL NOTE.—In the June number of "Clinical Medicine" we printed a number of articles containing suggestions for "The Doctor's Vacation." Doctor Goodhue's contribution to this symposium reached us too late for that number, but we are pleased to be able to present it herewith.

TO BE sure, why not Hawaii for the doctor who is lucky enough to get away from home for a month or two?

Summer or winter, Hawaii is a good, safe, healthful, comfortable place to rest in for a month, or, for that matter, as long as a visitor can afford to stay.

From San Francisco to Honolulu, first cabin, the fare is $65; or, $110 for the round-trip. You have the choice of three lines of steamers; viz.:

The Oceanic Steamship Company.

The Matson Navigation Company.

The Pacific Mail Steamship Company, and all reliable and steady, with offices in San Francisco. Any doctor interested may call on our Mr. Taylor, at the Hawaiian Promotion Committee offices, on O'Farrell Street, and learn anything he wants to know about Hawaii. Also, my name may be mentioned, if it is thought that will help.

If I should state a preference (and I have been on nearly all, if not all, the steamers of all three lines), it would be for the "Manoa," "Matsonia" or "Honolulan," of the Matson Line.

The cabins on the "Honolulan" are commodious, while the table and service on all the Matson steamers are unusually good. Of course, a little tipping is necessary—say, $5 for the one-way trip.

The voyage is made in about seven days, with rather cool weather for some seventy-two hours; after that, "Lowell's June" till Honolulu is sighted.

Storms do not often occur between San Francisco and Honolulu, and, when they do, are not violent.

No matter what season of the year it be, our voyager may need heavy clothing in San Francisco and for three days after leaving land.

Thereafter, ordinary summer-clothing—white flannel or linen duck. The usual summer underwear, tan or white buckskin shoes, soft felt hat or Panama are the thing. No stiff hats or gloves are needed here.

If the doctor has friends in Honolulu and expects to participate in social functions, he ought to bring a Tuxedo and evening suit, besides his Panama. Or, his linen duck will be acceptable and quite in order, instead of the Tuxedo or more formal evening suit.

The cost of living in Honolulu is not necessarily high. At the Young Hotel (which is the best low-rates on European plan), from $1.50 to $5.00 a day are the charges. There is a good café in this hotel, where meals can be had at reasonable rates. The rates at the boarding-houses run from $10 a week and up. Rooms and restaurants are about as elsewhere in quality and prices, though the latter are not numerous or particularly good.

Travel between the various islands is by boat, as walking is bad (!); and those who have never been seasick may chance to experience that sensation; but most of the trips are made in one night, so the misery is not prolonged.

While many overland excursions may be comfortably made in the automobile on Oahu (Honolulu's island) and many interesting sights taken in, I should advise visitors to choose the Volcano trip and see Kilauea, the active crater. For the latter, take the Inter-Island Steam & Navigation steamer "Kilauea" and go direct to Hilo; or, come by S. S. "Mauna Loa" to ancient Kailua. The latter trip will enable the tourist to run through the famous Kona coffee district, and also see Kealakekua Bay, where Captain Cook was killed in 1779. A monument stands at this spot, and it bears the following inscription:

IN MEMORY
OF THE GREAT CIRCUMNAVIGATOR
CAPT. JAMES COOK, R. N.
Who Discovered these Islands
on the 18th day of January, A. D. 1778,
and who fell near this spot
on the 14th day of February, A. D. 1779.
—
This monument was erected
by some of
his fellow countrymen.

Kona is noted for its climate, which, by many travelers, is said to be the most perfect in the world.

It costs about $12 each way to and from Hilo, and $10 between Honolulu and Kailua. From Kailua to Hilo the fare will be a little more by boat, and a great deal more if an automobile is taken and the trip made overland. Hotel rates in Hilo and at the Volcano House are $5 a day. This trip can be made in ten days. The Promotion Committee is selling round-trip tickets, including all expenses, for $40.

In all essential respects, Hawaii may be seen on Oahu—its climatic aspects both leeward and windward, its mountains, streams, wooded valleys; its flora, too.

The trees and shrubs of Hawaii are worth coming far to see. These, with the glorious vistas of sea and sky, the soft, balmy air and caressing breezes, have given Hawaii a reputation for restful languor that is not undeserved.

Here, Charles Warren Stoddard "loafed and enjoyed his soul," writing beautiful things about Hawaii, which I have not the space to quote; here, too, Robert Louis Stevenson returned again and again, ever reluctant to leave; here, Mark Twain came to stay for months, and long afterward wrote of his impressions:

"No alien land in all the world has any deep, strong charm for me but that one. No other land could so longingly and beseechingly haunt me sleeping and waking, through more than half a lifetime, as that one has done. Other things leave me, but that abides; other things change, but it remains the same. For me, its balmy airs are always blowing, its summer seas flashing in the sun; the pulsing of the surf-beat is in my ear, I can see its garlanded crags, its leaping cascades, its plumy palms drowsing by the shore; its remote summits floating like islands above the cloud-wrack; I can feel the spirit of its woodland solitudes; I can hear the splash of its brooks; in my nostrils still lives the breath of flowers that perished twenty years ago."

Honolulu itself is a beautiful city, and furnishes all the modern comforts the traveler may wish. It is sometimes a little warm, but not often uncomfortably so to one who in dress and movements adapts himself to the climate.

On the whole, I know of no more delightful vacation trip than that to Hawaii from the mainland, if taken by a man who is temperamentally fitted to travel anywhere else.

And to the adventurer to our shores, I can promise a reminiscent after-glow of remembrance that will be a joy forever in his memories of experiences.

Refraction for the General Practitioner

The Ophthalmoscope

By Thomas G. Atkinson, M. D., L. R. C. P. (Lond.), Chicago
Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details, if you do not understand him fully.

I HAVE already said that the information to be gained by means of the ophthalmoscope in respect of refraction is exceedingly meagre and difficult to obtain. However, with a view to making our treatment of the subject complete, I will explain the use of this instrument in estimating errors of refraction.

The principle of the ophthalmoscope is essentially the same as that of the retinoscope; that is to say, it is designed to intercept rays of light emerging from the patient's eye and to focus them for the observation of the operator. Its construction is also similar, consisting of a mirror pierced with a central sight-hole, behind which the observer's eye is placed for the purpose of receiving these emerging rays. The working-method, however, is different.

In using the retinoscope, our aim was, to bring the emerging rays to a focus at the sight-hole, without the help of the observer's own refraction, using lenses for this purpose. With the ophtha moscope, on the other hand, the aim is, to make the emerging rays parallel when they reach the sight-hole and then to focus them on the observer's retina by means of his own refraction; which latter must, of course, be normal and his accommodation at rest, in order to accomplish this Lenses are employed to bring the emerging rays to parallelism, but in the case of the ophthalmoscope, these lenses are attached to the instrument, behind the mirror, in a cylinder similar to the cylinder of a revolver, and are wheeled into place by the operator's finger, as needed. There is in this cylinder a series both of plus and of minus lenses

There are two methods of using the ophthalmoscope—the direct and the indirect. The direct method gives us, as its name implies, a direct, upright image of the fundus, very large and detailed, but not complete; that is to say, we can see only a portion of the retina at a time, and must sweep it around, like a telescope, in order to examine the whole eye-ground. The indirect method gives us an inverted image, rather small and with less detail, but complete; we can see the entire fundus at once.

For the practice of the direct method, a strong bull's-eye light should be placed just behind the patient's head and to the side of the eye to be examined, about on a level with the patient's ear. The operator seats himself, *vis-a-vis*, close to the patient, on the side to be examined, and applies to the sight-hole of the instrument his own eye corresponding to the patient's eye under scrutiny; that is to say, his right eye for examining the patient's right eye, and *vice versa*.

Since it is imperative that the operator's refraction be normal and his accommodation at rest, if he have any error of refraction he must wear his proper correction or else wheel his proper correcting-lens behind the sight-hole, and must relax his accommodation while he makes the examination. Having got the disc of light on the patient's pupil and obtained the red fundus glare (as in retinoscopy), he now places his eye and mirror quite close to the patient's eye, still keeping the illumination on the pupil.

Now, since the patient's accommodation is at rest, if his refraction be normal, the rays emerging from his eye will be parallel; and, since the operator's refraction is normal and his accommodation relaxed, his eye is in a condition exactly to focus these parallel rays upon his own retina. Therefore, if the patient's refraction be normal, he should obtain a clear and detailed view of the patient's fundus, seeing all the arteries, veins, and pigmentation, the nerve-head, and every other landmark of the retina.

If, however, the patient's refraction be not normal, then, of course, the emerging rays will not be parallel and will not focus on the retina of the observer so that he will not get a view of these eye-ground details. In that case, it will be necessary for him to wheel behind the sight-hole the lens, plus or minus as the case may be, which will render the emerging rays parallel before they enter his own eye;

and that lens will be the nature and measure of the patient's error. As to whether it be a plus or minus that is needed, that can be ascertained only by trying, the rule being to try plus first. If this plus-lens improves the view, then find the desired strength of plus-lens; if a plus makes the view worse, try minuses in the same way. If it requires plus, the patient is, of course, hyperopic; if minus, he is myopic.

If the patient be astigmatic, the view obtained of the details of the fundus will differ in the two chief meridians. If, for instance, the two chief meridians be vertical and horizontal, the observer will see the up and down vessels clearly with one correction, and the cross vessels clearly with another. In that case, these two meridianal corrections are ascertained, and the final correction for the eye worked out as already explained.

It will be readily seen that in this procedure mathematical accuracy is almost impossible. The chances for error are too great, the most mischievous source of error being the failure of the observer properly to relax his accommodation. Especially is this so in hyperopic errors of the patient—the commonest of all errors. It is so easy—so irresistible, almost—for the observer to accommodate a little and thus get a focus of the divergent emerging rays that one must always suspect the findings, except where the operator is a man of long and repeated experience in the art of ophthalmoscopy. In myopia, of course, there is no such irresistible incentive to accommodate, but the slightest accommodation on the part of the observer would vitiate the findings here also.

This is even more difficult of accomplishment. Perhaps I better should say, more difficult of interpretation, for the actual technic is, I think, easier. For this procedure, the light should be placed above the patient's head, and the operator can use his own right eye for both observations. Here, he seats himself about a meter away, in front of the patient—the precise distance is not important. Having found the red fundus glare, he holds with his left hand a plus 9 or 10 lens (called the "objective") in front of the patient's eye and adjusts the distance between his sight-hole and this objective so as to give him a clear magnified view of the patient's fundus. As stated, in this procedure he will get a small view, about the size of a dime or a nickel, of the entire red fundus, with the circular pale disc (nerve-head) in the center, from which all the vessels branch away.

Since this is a virtual image, which the operator is viewing objectively, just as though it were suspended between himself and the patient, it is plain that the size of the image (or at least its apparent size) depends upon the parallelism, or otherwise, of the rays that make it. If they are parallel (i. e., if the patient's eye be normal in refraction), no matter where the objective lens be held between the patient's eye and the observer's, the apparent size of the image will be the same. If they are divergent (i. e., if the patient be hyperopic), then the farther away from the patient's eye the objective is held, the more divergent the rays, and the smaller the apparent size of the image. If they are convergent (i. e., if the patient be myopic), then the farther away from the patient's eye the objective lens be held, the more convergent the rays and the larger the apparent size of the image.

In the indirect method, therefore, we test the nature of the patient's refraction by slowly withdrawing the objective lens farther and farther away from the eye, and watching through our sight-hole the apparent size of the disc. If it remain the same, we conclude that the patient is emmetropic; if it diminish, he is hyperopic; if it increase, he is myopic. If it increase in one direction and stand still or diminish in another, he is astigmatic. The indirect method is not available for estimating the degree of error.

The real value of the ophthalmoscope is not in the estimation and correction of errors of refraction, but in the detection of diseased conditions of the retina that so often are associated with poor vision. Many patients consult the physician because of defects of vision, thinking that they need glasses, when, as a matter of fact, the defective sight is due to diseased conditions of the eye, such as retinitis, retinal anemia, glaucoma, chorioiditis, and what not.

These conditions are all diagnosed by the ophthalmoscope. Hence, while it may not be a very useful agent of refraction, being vastly outdone in that respect by the retinoscope, nevertheless, it is an almost indispensable instrument in the hand of the refractionist, too, since it enables him to separate cases of organic visual defect from those of refractional error. And this should be done *the first thing*. That is to say, whenever a patient complains of poor vision, the ophthalmoscope should be called in aid before any other procedure is employed; for by its means we can at once determine the soundness of the eye and get an idea of the nature and rough extent of any error of refraction.

The Medical Economic Situation

A Study of Plans for Professional Defense

By Daniel S. Hager, M. D., Chicago, Illinois

PERHAPS there is no subject more interesting and at the same time so important to the general practitioner as that of the right to earn a living for himself and his family; and day by day it is becoming ever more difficult to exercise this right.

The general cost of medical education has greatly increased; the necessary time of preparation has been lengthened; and the importance of postgraduate work is becoming more and more apparent. The cost of living has more than doubled within recent times, while the professional fees for medical services have either remained stationary or even been lowered.

The physician finds that his teaching and work and influence have very materially lessened the prevalence of sickness, thus himself limiting the field of his own efforts. At the same time he has helped to build up institutions and systems which give certain men prestige over their fellow practitioners, enabling them thereby to secure large fees for themselves and besides practically to rob the general practitioner of that which he has. And what is perhaps the most important of all, these institutions and systems have been grossly abused by the public, the people having taken advantage of them at the expense of the medical man, and have not given anything like a *quid pro quo;* for which they doubtless are much less to blame than is the profession itself for allowing such conditions to spring up and to persist.

The economic problem of the profession, therefore, centers chiefly around medical-charity abuse and contract practice. Most medical-charity and contract practice unquestionably are here to stay. In the larger cities, clinical material is constantly needed, while the attitude of the industrial world toward the question of health and efficiency ensures the permanence and growth of contract practice. In fact, if my interpretation of the outlook is correct, before many years have passed a national industrial insurance bill will be forthcoming in this country, similar to the one now in force in England.

We Need to Apply the Golden Rule

In my opinion, all of these problems are to be solved by the frank and genuine application of the golden rule among the profession itself, and its extension from the profession to the public. The doctor who gains prestige must give something in return. The people who are seeking health must be shown that they will have to pay for this service—by submitting themselves as educative material to the undergraduates.

The practitioner, on the other hand, must learn to work with his own hands and to manage his cases himself; and sooner or later he will be just as proficient as the "big guns" who now monopolize the hospitals and dispensaries. The large number of privately controlled and privately financed postgraduate schools should gradually be brought under one head and be financed by the profession or even by the public, while the instruction given should be not in the hands of only a single individual, but various physicians from the special branches of medicine represented should be on the staff.

Simple as this scheme of solution may sound, however, the profession needs to realize that this change will not bring itself about automatically.

It is absolutely necessary that medical men should undertake a systematic and organized effort for their own enlightenment. The economic situation is at this moment by far the most pressing and serious of all the medical man's problems and it behooves the profession to lose no time in organizing effectively and getting seriously to work at an active solution of this threatening problem.

Plans for Economic Defense

Two years ago, while I was a member of the Medical Charity Abuse Committee of one of the largest medical societies in America, I began an extensive correspondence with the various societies throughout the country, to find out what was being done in this regard, and I now wish to give a summary of this correspondence and then outline some logical measure for correcting the evils now confronting the physician both in the city and in rural districts. In fact, the effort at solution is already well started; for in Chicago and New York, the cities most seriously affected, there already are two organizations under way—economic and social clubs or

federations; New York having the largest number of them, with Chicago a close second.

It should be understood that nothing can be expected from the old-line organizations, as their rules restrict the method of doing business, and their methods of organization do not permit much attention being given to economics. We frequently hear it deplored, both inside and outside of these old-line organizations, that the professional ideals are being forced to give way to commercializing processes. The real trouble is that no systematic or intelligent attention is being given to the economic side of medical practice. A national movement necessarily must be started in this direction before we may expect any improvement; and this opinion is being amply verified by the large number of economic clubs now being organized along this line, which naturally must increase, and ultimately be united into, a national body.

The Medical Centers Interested

While New York is the center in which conditions are worse, it is here that most has been done toward a solution of the problem. They have not solved it yet, but are putting forth energetic efforts that in the near future are sure to bring about great results both to the profession and to humanity at large. There are now in existence some half a dozen economic clubs and one clinical club, which are so many progressive forces, compelling recognition by old-line medical organizations. These clubs demand the use of clinical material in a manner calculated to gain the confidence of the public, as well as to secure ethical justice for the rank and file of the profession.

New York began the investigation of medical-charity abuse in 1878; but, while the work has made rapid progress, it has been done mainly through each individual unit in the profession asserting itself. My personal opinion is that a central clinical home built up and controlled by the medical profession will furnish the ultimate solution of the charity-abuse question in New York City.

It is now some six years ago that the Chicago society began to take notice of this matter, but, unfortunately, not much has been accomplished, owing to the fact that the Chicago Medical Society has been in the hands of two political factions for a number of years. A brighter star, however, is now appearing, for already one economic club has been organized, and its members are enthusiastic and energetic; and other similar clubs are in contemplation. This will mean for Chicago the same good that has been accomplished in New York.

The Philadelphia society has had this matter up for some time and has formulated a set of questions for the dispensary-men to answer; and this has brought out the fact that the heads of dispensaries resented the attempt by men on the staff to bring about any change in conditions. Hence, the matter had to be dropped in that particular direction. The reformers then attempted to place all dispensaries and hospitals under state board of charity control; but this movement failed at the last session of the legislature, because of the press of other bills before that body and also because of the apathetic attitude of the profession at large. I am told that Philadelphia expects to go before the legislature again next year.

Other cities canvassed were Boston, Baltimore, Richmond (Va.), Atlanta, New Orleans, St. Louis, El Paso (Tex.), Los Angeles, San Francisco, Seattle, St. Paul, Denver, Omaha, Kansas City, Cincinnati, Milwaukee, Detroit, Buffalo, and Cleveland. The reports from the cities named indicate that in most of them the charity abuse and contract question is being agitated, but that nothing very definite has as yet been done, either in the way of organization or of actual results.

The Commercializing of the Profession

The most casual observation will show that the tendency of the time in medicine or in the industrial world is toward centralization and monopoly. There is plenty of proof to substantiate this statement.

The introduction, recently, of the surgical bill into the Illinois legislature, under which a general practitioner would scarcely even dare to lance a boil; the recent organization of a body of men calling itself the American College of Surgery—a bold attempt to build up an aristocracy in the surgical ranks of our profession; the inevitable oncoming of industrial insurance, which will enable the "big guns" still further to attempt domination and ultimate elimination of the rank and file—all of these things, besides others which I have not space to mention, point the same way.

Are you quite sure, doctor, that you yourself have not contributed to these threatening conditions? Put this question frankly before yourself, and ponder.

Wake up, brother, and become an aggressive, active, fighting unit; determined to better your own conditions and, in consequence, be able to give better service to

humanity, to which our profession is now and always must be consecrated. Or, are you willing, by remaining passive, to help still further to commercialize that profession to which you are tied?

Can you forget the struggle and the split in the British Medical Association when a few medical politicians tried to sell out the mass of the profession? Do you know that the British Industrial Insurance Act compels everyone to become an active unit and to contribute liberally in order to prevent his own extinction?

Then, in the face of these things, do you not think it were better for you to organize and make ready for future action now, rather than to wait until the politicians, medical as well as lay, have set the traps for you?

(To be continued)

Eugenics: An Entirely Unscientific Consideration

By A. L. Benedict, A. M., M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—This paper is a continuation of one upon the same subject that appeared in the December, 1913 number of "Clinical Medicine." While it is complete in itself, the reader will find it of added interest if he will look up the first installment, and also read Professor Jordan's paper on "Sex-Sterilization," which occurred in the same issue.

IN THE beginning of the previous article, dealing with general questions of inbreeding and outbreeding, and related problems, it was intimated that the subject was not a new one by several thousand years. In regard to the influence on stirpiculture of pathologic states, and especially of venereal diseases, habit-addiction, stress of civilized life and more or less marked abnormalities of the nervous system or at least of nervous function, it must be admitted that the agitation is comparatively recent.

It is true that the general prejudice in favor of sobriety, physical health, mental and nervous equilibrium, and good moral character has been held from the most remote times. But pathology as a science is very recent, and, so, anything like definite knowledge regarding the influence of disease upon heredity must be equally recent. However, the mere fact that eugenics is being freely discussed where, according to old-fashioned standards of more or less false modesty, it should not be, and that young and old, of both sexes and all degrees of education are frankly interested in the subject, does not imply that no attention has been paid to it in the past or that anything of particular value has been just discovered.

Doubtful Value of Academic Teaching

While he was a medical student, a trifle over a quarter of a century ago, the writer and his comrades would, undoubtedly, have been shown to the door if they had introduced eugenics as a subject of polite conversation by the young women now the mothers of the young girls who at present are reading papers upon it. But it was by no means neglected either in college or in men's clubs and in associations for religious and moral advancement.

On entering practice, the writer found that his men friends applied for a clean bill of health in regard to venereal diseases, quite as a matter of course; and, as to tuberculosis, cancer and other constitutional diseases, practical regard for eugenics counteracted romantic attachment, probably as strongly as today, when the odds remain in favor of the latter in the practical outcome. Even before this, instruction in sex-hygiene was by no means neglected, and, if not so elaborate as at present, still was of a sensible, practical degree. The innocence of childhood was retained by grown people as a comforting ideal, but was ridiculed by most of the boys whom the writer knew, from the age of five or six.

From the technical standpoint, it does not appear that the cause of eugenics will be materially assisted by transferring interest in it from the individual parent, teacher, clergyman or physician to the same acting as wholesale distributors of information from the rostrum, nor by making it a matter of current literature and parlor conversation.

The enthusiasm of anemic, splanchnoptotic old maids over Mendelian dolls and diagrams of the ravages of the gonococcus is pathetic,

but somewhat futile. It undoubtedly is better that boys should receive instruction from mature men of sense than from quack literature, family medical guides read surreptitiously, and from that former authority of authorities, the boy who works in the drugstore. However, it is not impossible that the very general and frank attention to sexual matters may, like instruction in physiology, of general nature, electricity, geology, and so on, lead to experimental research in ways not at all intended.

In one sense, it is well that systematic cooperation should provide against the neglect of individual parents, teachers, family physicians to give due warning to children of the many dangers that beset them. But it is not impossible that the publicity which such systematic instruction involves will act suggestively to keep the matter of sex prominently in the minds of immature children during the period of puberty and adolescence when the interaction of physical reflexes and psychic stimuli is least desirable, and that the degree of suggestion will be increased, in comparison with the former plan of personal, brief, and rather reluctant allusion to what were considered indelicate subjects.

Theory Versus Practice

Formerly, it was held, on somewhat theoretic grounds, that all children were, or at least ought to be, innocent. The boys pretty thoroughly understood that this was a theory so far as they were concerned, but they held this theory as still applying to girls, though with more or less skepticism.

It is conceivable that the common knowledge by children of one sex, that the other sex is instructed and interested in sexual matters, may lead to a sharing of this interest between the two; at first, possibly, quite innocently, but with the same potential danger as occurs when adults, who are supposed to have more judgment and self-control and less curiosity than children, commence an impersonal and quite Platonic discussion of such matters.

These presentations of possible results are not intended to express a definite opinion. Nothing but actual experience, after the lapse of several years, can determine whether popular and free discussion of sexual matters, without regard to sex or age, will tend toward morality and a better race or toward their opposites. It might seem necessary to qualify the allusion to age, but, since one of the most popular illustrations of the instructionists is that of a child apparently just learning to talk eagerly interrogating its mother, even this criticism scarcely holds.

There is one phase of the problem, however, which does not seem to have been observed by the instructionists, and which would be very seriously considered in a matter of therapeutics, politics or applied invention. It is this. If general instruction of the young in sexual matters should turn out unfavorably, the effect of this will be permanent. The knowledge conveyed can not be stopped, but will be imparted from one generation of children to another; in more or less garbled form, to be sure, but all the more harmful on that account.

Parental Judgment Is Nullified

There is another, almost equally serious, problem to be considered. While it is the duty of society, either by public authority or by private philanthropic organization, to supplement or displace the influence of a careless, negligent or vicious parent, it is only in the clearest cases of bad judgment that society has the right to thwart the otherwise intelligent, moral, and careful parent in carrying out such a scheme of religious and social influence as he may deem best for his child.

Now, there are parents who are intelligent, moral, and careful of their children's interests in every respect, save that they hold, in regard to the matter of innocence, with the majority of parents of the last and the preceding generations, instead of with the majority of parents and quasi parents of the modern view. The present plan of sexual instruction removes from these parents the possibility of carrying out their theories, except by a degree of supervision amounting almost to incarceration, which is impossible for many and harmful from almost every other standpoint for all.

For these two reasons, the writer, although by no means opposed in theory to the idea of instructing children along lines of sex-hygiene and morality, feels that the matter should be approached with great hesitation.

No Racial Deterioration Through Free Breeding

To turn more directly to the influence of pathologic conditions upon stirpiculture, it is well to consider general influences first.

Investigation justifies a rather more optimistic view than is ordinarily held. With some exceptions, the human race has not deteriorated in stature, strength, longevity, acuteness of the special senses, and so on, in spite of the supposedly deteriorating in-

fluence of civilization, so far as osteologic evidence can be depended upon and comparison of athletic and other records, ancient and modern, is possible.

It is true that the demands of civilization often cause myopia and astigmatism, render the building of muscle inconvenient, expensive, and unnecessary, and, in other ways directly sacrifice the individual. But, not only does civilization minimize the importance of many handicaps upon the individual, but a member of civilized society not already handicapped in some such way, placed in competition with a savage in what are usually considered natural—that is, non-artificial conditions—holds his own even without the adventitious aid drawn from his civilized experience and knowledge.

While, as man has evolved, specific infectious parasites have also evolved, so as to increase the number of diseases to which he is especially liable, in most instances, his resistance to these diseases has also increased, so that the exanthemata, and so on, comparatively low in mortality when attacking civilized man, show a remarkably increased fatality when first introduced among a savage race. History shows that Europeans were pretty thoroughly syphilized during the middle ages, and, while the history of gonorrhea is more contradictory, it is more reasonable to suppose that it, too, is an old disease of the Caucasian race. (Note the account of Abraham, for example, in Genesis, and the somewhat vague medical writings of the Greeks and Romans.)

No one can deny the terrible consequences of these two diseases, but, so far as stirpiculture is concerned, the least terrible is their well-demonstrated influence in preventing conception, viable birth or in early killing such offspring as are viable.

It is possible in almost every case of cancer in which the patient has a large, known family to find other cases, and cancer certainly is increasing along with, perhaps in excess of, the recently achieved prolongation of the average of life. But it is doubtful whether cancer actually produces a hereditary tendency to cancer, while it is almost certain that it is never directly transmitted to the offspring. Usually coming late in life, it does not tend to reduce fecundity, except in the sense that a prolific mother seems to be increasingly more prone to develop cancer of the uterus, and thus to have her further potential fecundity stopped.

Tuberculosis presents many problems difficult of solution, and no one will deny the unwisdom of marrying a tuberculous person. Still, without attempting their discussion, it may be stated broadly that it has shown no such hereditary tendency as to limit itself to special families and to exterminate itself by exterminating the susceptible material; nor, on the other hand, has it disseminated itself universally, unless in a very mild, self-immunizing form. At the worst, tuberculosis has not exceeded the ten-percent limit. According to a conservative study of recent statistics, it seems to have diminished at least at the same ratio as the general death rate, while, according to optimists, its mortality has decreased more rapidly than the general rate.

The evils of alcohol need no further embellishment. For all that, it must be conceded that whatever advance any race has made after leaving the stage of savagery and before sufficient ingenuity had been developed to manufacture an alcoholic drink, and up to about one hundred years ago, has been in spite of a nearly universal addiction to alcohol. Practically every important historic event has been brought about by men who used alcohol freely, often excessively, according to present standards.

One detail, possibly of minor importance—but so much emphasized in recent attempts to better the condition of the race that its mention needs no apology—is the literal interpretation of part of the second commandment, which refers to visiting the sins of the father . . . . unto the third and fourth generation.

Dr. J. Henry Dowd has recently discussed this subject in *The Buffalo Medical Journal*, and made a very good argument against the transfer of a definite pathologic process even beyond the second generation. However, the transmission of racial markings, of general weakness and of bad habits, the last mainly by environment and example, does occur to the fourth generation, and scarcely beyond it.

At the risk of displaying an optimism that undoubtedly will arouse unfavorable criticism, the writer ventures to emphasize the self-purifying tendency of the hereditary current. Taints of all kind rapidly subside, become innocuous by dilution or, so to speak, evaporate by the marked tendency to sterility and nonviability, or even to nonmarriagibility expressed in such ways as impotence, frigidity, and lack of attractiveness.

Before condemning this statement too strongly, the critic should ask whether the race, on the whole, has improved or not. If,

as the writer believes, it has improved, undesirable types tending to extinction, it should be remembered that this process has occurred in spite of pretty general leprous infection of the ancient civilizations, of prevalence of cholera for centuries, of almost universal syphilization of European subraces, of a 10-percent death rate from tuberculosis maintained for generations in many races, of a male involvement with gonorrhea estimated by the most conservative above 50 percent for several generations, and dating back many centuries; not to mention occasional and constant but relatively minor infections of a considerable variety.

And all these unfavorable pathologic factors have coexisted with a general ignorance of their exact nature and of definite means to combat them, until within the memory of men still of middle life, barring a few crude, empiric methods of prophylaxis and treatment of greater or less antiquity.

The general contention, that the race has improved, warrants the inclusion of a few detailed statements. For example, primitive races, in spite of superficial claims to the contrary, do not show greater stature, perfect preservation of teeth, greater acuity of the special senses, except as habits of life directly tend to the development of defects in civilization, greater resistance to disease—but rather less—nor, with the qualification just made, any other marked superiority to supposedly decadent modern types. An inquiry will show this to be the case.

Hence, we must regard eugenics not as a study necessary to prevent the extinction or deterioration of the race, but as one to expedite progress, to avoid the futile, though conservative, process of elimination of diseased and weak offspring, to prevent the needless sacrifice of individuals, and to relieve society of the enormous burden of caring for defectives.

Genitourinary Disease and the General Practitioner

By D. E. Piconi, M. D., Brooklyn, New York

PERHAPS there is no other branch of medicine in which the general practitioner has more needlessly and ingloriously acknowledged himself beaten and incompetent by allowing the specialist to step in than in the genitourinary field.

So unconcerned and careless, indeed, has the family doctor been in this respect that nowadays the ordinary layman in our cities and towns turns in at the specialist's office for even the treatment of an ordinary attack of gonorrhea. Surely, this implies an utter lack of confidence in the family doctor in these matters—the same family doctor who, by even the same individual, is allowed to tide him over a crisis, with full confidence and without the demand for a specialist's expert and costly advice.

The Cause Lies in the General Practitioner Himself

Now, no one is to blame for this lack of confidence on the layman's part, in affairs genitourinary, but the practitioner himself. For, the truth of the matter is that he neglected this important specialty perhaps even while at college, where little account, at best, was taken of it; and later, when the doctor began in his practice, he let the matter go and took the easiest way out of it. So, it began to be murmured around that "Dr. So-and-So may be all right in some things, but, as for treating private diseases, no sir-ee." And that was the end of the doctor's genitourinary practice.

On the other hand, the doctor may have been taught the thing and studied it well enough at school, but he has been in harness for about ten years, and, having been too busy, or too lazy to keep abreast of the times, has not bothered to take note of the vast strides which this particular branch of medicine, especially, has taken in the last ten years. Therefore he has let Dr. O. K. Pusher, who employs modern exact methods in diagnosis and treatment, get ahead of him; with the result that Pusher has slowly acquired a reputation for this sort of thing, and is going up, up, up, until one fine day he hangs out a shingle bearing in embossed gilt letters the legend, Specialist in Genitourinary Diseases. Some time later, having become quite important in the community, he decides that he can dispense with qualifying appellations and, so, boldly erases all distinctive titles, even the handle M. D., and

his office-hours as well, so that his sign now simply reads, Doctor Pusher. And this metamorphosis tells you the whole story.

The Income From Treating Genitourinary Diseases Is Worth While

And who has been the sufferer all this time? Whose pocket is less replete? Why, the family doctor's, of course—those patients were his originally, and should be his now. The specialist's income has been derived and taken from that of the other man, the regular practitioner—so, there you are. And a good little income it has been, too. For the care and diligence with which the ordinary man exercises in sex affairs and the total disregard of money when it comes to the successful treatment thereof is proverbial. The votary at the shrine of Aphrodite, when "caught," is willing to spend his last cent to set matters straight in this respect, and is very sensitive about it—as may be seen in the fabulous fees exacted for expert treatment and the wealth acquired by quacks engaged in this line.

So, it may readily be seen that the general practitioner pays heavily for his lack of proper attention to this particular branch of medicine, and that his loss because of this dereliction is considerable.

Brushing-up Needed

All this ought to teach your ordinary practitioner that it is really worth while to "brush up" on the modern methods of exact diagnosis and treatment of this class of diseases and thereby increase his income very materially.

Let him buy a good up to date edition of some practical treatise (or, several of them) on the subject, of which there are many excellent ones on the market.

Let him become proficient in the technic and indications for the use of the various more common instruments used in diagnosis, such as Valentine's irrigator, Thompson's searchers, Nitze's observation cystoscope, Klotz's endoscope, also catheters and bougies.

Then let him go slowly, carefully, intelligently through each case and not be afraid to engage the services of a good, reliable laboratory.

Some Remarks on the Examination of the Urine

Through urinary-examination findings we can invariably spot a kidney lesion or an acute or chronic suppurative process. In this respect, the finding of pus or of epithelial cells is very important. If these are found, one should send another specimen to the laboratory, with instructions to pay particular attention to these two abnormal constituents and to the reaction of the urine. The report on this must be studied carefully.

Pus in the urine, of course, always indicates a suppurative condition somewhere along the genitourinary tract—renal abscess, pyelitis, cystitis, stone, urethritis or prostatic abscess. In the former two conditions, the urine usually is acid in reaction; whereas, in the other conditions mentioned, it usually is alkaline. Pus from the kidney is apt to vary greatly in amounts or is discharged intermittently; while that coming from other places along the tract (bladder) is fairly constant in amount and is discharged continuously.

As a routine measure, in all pus-urine cases, with obscure and conflicting symptoms, as well as in those which do not respond to treatment, one cannot too urgently advise to have the guinea-pig inoculation test made in order to determine whether or not the patient has a tuberculous condition of the kidneys.

A Word on Phimosis and Circumcision

It were well for every practitioner to be thoroughly versed in the technic of the operation for circumcision—which is easily and safely done. He should do this, not only to cure such a disease as phimosis or to cause a disappearance of irritative nervous maladies having a sexual origin, but also in order that we may suggest the operation to the various venereal patients who present themselves.

Wolbarth has already pointed out that circumcision is decidedly a prophylactic measure against syphilitic infections, chancroid, venereal warts, herpes, epithelioma, and so on; that it works a diminished tendency to masturbation and nocturnal pollutions, convulsions, and other results of local irritation; and that it prevents balanitis.

In view of all this, it ought to be the duty of every practitioner who is treating a venereal disease to point out the advantages to his patients and strongly recommend the "silly little operation," while, at the same time, incidentally obtaining his little fee for services rendered.

In closing, I may be allowed to state that one of the best rules to remember in treating venereal patients in general is this:

Treat your patient with consideration, with sympathy and tact. Don't ridicule; don't be sarcastic. Don't try to deceive him. Don't make your fee exorbitant. Treat your venereal case as you would a typhoid case, and watch the results.

The Management of Chronic Maladies

Methods Which Have Proven Successful

By J. M. French, M. D., Milford, Massachusetts

EDITORIAL NOTE.—This is the final paper in a series of articles which have been appearing in this journal at irregular intervals for several months, and in which the practical application of the active principles and allied remedies to specific diseases have been given special attention. Doctor French knows his subject and makes his articles of surpassing interest as well as of great practical value.

UP TO this time we have considered only the treatment of acute diseases. In these conditions the needs of the patient are urgent. The treatment must begin early, and be pushed to effect. In the words of Burggraeve: "To acute maladies we must oppose a sharp and active treatment; that is to say, the treatment must proceed as rapidly as the disease."

It must be remembered that in these cases the result to be sought for is speedy recovery, the thing most to be feared being death. This afternoon, however, we are to consider the general principles that should be followed in the management of chronic maladies, where the progress of the disease is slower, and where improvement and comparative comfort of the patient often is the best that reasonably may be anticipated, and where death is not always the worst thing to be feared.

Some chronic diseases are curable under proper management, while others are incurable under any management or any form of treatment. You may ask me, "If a disease is acknowledged to be incurable, why treat it?" The point is well taken; the answer, however, is plain.

Suppose you yourself have a well-marked valvular disease of the heart. You may be quite sure that your affection never will be cured, never can be cured; still, is that any reason why you should be abandoned by your physician and left to suffer the worst that nature can bring upon you? Certainly not! For, with proper care and such treatment as may be indicated, you can in all probability go on for twenty years or longer in comfort and good general health, scarcely knowing that you have leaky valves, save as it is revealed to you by the stethoscope of the medical examiner; while without appropriate treatment life would soon become a burden and death a welcome relief.

It is told of a noted divine that he once gave a very remarkable prescription for the attainment of long life. Listen, and take note of it, for there surely is something in it. This is how to attain long life: "Have an incurable disease—*and take care of it.*"

I do not, indeed, advise that you should follow literally this suggestion, especially the first part of it; and, yet, I think that if you will read between the lines you will see that it is one of the best prescriptions for longevity that ever was given. For you may have noticed that it is the bluff and hearty athlete, the man who seems always well and active, the *bon vivant* who enjoys his food and thinks that he can eat anything, because he has a cast-iron stomach—it is this kind of a man who has a way of dropping off suddenly in time of stress or strain or of dying quite unexpectedly at an age not past middle life.

On the other hand, the man who has found his limitations, and who found them early in life; who knows that he has disabilities and weaknesses, and where they are to be found—and who then guards his weak spots with zealous care—this is the man who lives to a respectable old age (though perhaps not to extreme old age) and who does his full share of the best work of the world. The reason is that he has learned to take care of himself. And so it is with many chronic maladies: if early recognized and properly cared for they are fully compatible with length of days, a useful life, and personal enjoyment. These things are worth remembering when we are considering the management of chronic diseases.

Another difference between acute and chronic ailments is that when a person is ill with an acute disease, if the tide is turned and recovery sets in he expects to be well in a short time, able to stop all medical treatment, forget all thought of taking care of himself, and drop back into his old habits of living. But many times the chronic patient must content himself with something less than this—must make up his mind to keep a close watch over himself all his life, and it may be take more or less medicine as long as he lives—that is, if he wants to live long or be of any use in the world or enjoy himself while he lives.

It must be remembered that there are many abnormal conditions which, while not classed as diseases but merely as "diatheses," yet,

are the cause of great discomfort and much suffering and meanwhile prepare the way for serious and even fatal diseases. For example, there is the condition—alas, all too common—of chronic constipation, which results in autointoxication, arteriosclerosis, rheumatism, neuralgia, and unnumbered other forms of suffering.

Chronic Constipation

Chronic constipation has many causes, all of which may be included under the two heads of inherited tendencies and acquired habits. It can be avoided in most instances by correct habits, provided they are formed in early childhood; and even after it has become in a measure fixed much may be done to relieve and correct it by proper diet, hygiene, and remedial measures of various kinds.

I do not know of any medicine which can be depended on to cure constipation. In fact, very few confirmed victims are ever really cured at all, although they may be greatly relieved. However, the combination that has given me more help than any other, and which comes nearer to being a cure for chronic constipation than any other combination of drugs of which I have any knowledge, is the little anticonstipation granule devised by Doctor Waugh. In this granule a number of drugs are combined with great skill for the purpose, and the finished product possesses the unusual property of producing the desired effect in gradually and constantly reduced doses, until at last, when taken in strict accord with the directions which Doctor Waugh has given, the remedy can finally be dropped entirely; and, with proper care, the constipation will not return.

That is to say, this is the way it works in favorable cases. However, in order to secure the result named, it is not enough merely to swallow a certain number of granules at a given time each day. Like the great painter's colors, the granules must be "mixed with brains." Burggraeve's directions again apply here: "To chronic maladies, we must oppose a deliberate method of treatment. That is to say, the treatment should proceed slowly, in proportion to the lengthened duration of the disease." Many cases of chronic constipation fail to be cured because of the too rapid withdrawal and too early discontinuance of the remedy.

Acidemia

Then there is the condition known as acidemia, which is closely related to the socalled uric-acid diathesis and the various manifestations of rheumatism. As among its early indications may be mentioned fermentation in the different portions of the alimentary canal, with eructation of gas, sour stomach, heartburn, and an unduly acid urine. This later is easily discovered by Harrower's method. When this acidity is found greatly to exceed the normal, it may be corrected, either by the administration of alkalis, to neutralize the acid; or by means of eliminatives designed to stimulate the glandular organs to greater activity, whereby the acid deposits may be removed from the system; or by a combination of both of the two methods, in conjunction with such a regulation of the diet and general habits as will prevent or at least lessen the liability to similar deposits in the future.

One of the best remedies for this purpose is composed of sodium bicarbonate, sodium sulphocarbolate, colchicum, juglandoid, and xanthoxyloid, besides sodium chloride and aromatics. This is put up in the form of a coarse granular powder, is readily soluble in hot water, and is not unpleasant to the taste. The most reliable indication for the use of this combination, and one in which I have never known it to fail of being useful, is a high urinary acidity. The simplest way with which I am acquainted of determining this acidity is by means of Harrower's sodium-hydroxide test. When the urinary acidity, as thus indicated, goes up, from the normal of from 30 to 40 degrees, as indicated by the acidimeter, to 60 or 80 degrees or more, as often happens, then you may safely prescribe this remedy, with the confident assurance that it will bring help and comfort to your patient, besides the reasonable probability of a cure; provided, of course, this remedy is properly used and continued for a sufficient length of time.

The patients to whom I first administered this mixture were selected because they showed a high degree of acidity of the urine, and their perspiration was so acid that it would tarnish chains and rings and gold and silver watches, and the like. One was a case of arthritis deformans of long standing in an elderly woman, and the other, one of alimentary glycosuria in a young man. I prescribed calomel, podophyllin, and the bile salts to be taken at night, with a sufficient dose of a saline laxative in the morning to insure free movements of the bowels. This treatment was attended by great benefit and improvement in each patient, but both were obliged to continue it almost uninterruptedly for two or three years in order to keep up

this improvement. In due time, however, conditions so changed that the improvement became virtually permanent, and it only was necessary for them to resort to the remedies in the occasional relapses occurring from unfavorable circumstances or lack of proper care. Of course, the arthritis deformans of these persons is not cured, nor ever will be; but the patient has been made vastly more comfortable and existence rendered more enjoyable by means of the remedy.

Another remedy of a somewhat similar nature, and which is of use especially in acute and chronic rheumatism, is composed of calcium carbonate, lithium carbonate, and colchicine, with aromatics. My personal experience with this combination has not been extensive, but it is considered a most effective remedy for many of the common manifestations of the uric-acid diathesis, such as lithemia, gout, lumbago, certain forms of eczema, and so on, in addition to the common forms of articular rheumatism.

There is nothing new in either of these combinations, and the physician may write his own prescriptions, adapting the drug and the dose to each particular case, if he pleases. There are decided advantages in this latter method; the only disadvantage occurring to me being that most physicians cannot write offhand, and many druggists cannot compound, prescriptions that will present the desired remedies in a form as compact, convenient, and pleasant for use as those which have been prepared by skilled pharmacists in large quantities.

By the rational employment of these and other remedies of the class, much may be done for the abatement of acidemias. The indications are not difficult to determine, nor are the remedies unpleasant to take—an important matter in chronic conditions, where the treatment must be long-continued. When in your practice you are confronted by conditions of this nature, you will find them worth trying; and, if you try them faithfully, making an intelligent application of the general principles which I have suggested and follow the special directions which you will find laid down in the books of active-principle practice, you may rest assured that you will accomplish much good for your patients.

Tuberculosis

Great headway has been made in recent years in the control and prevention of tuberculosis, and the present death rate is less than half as great as it was not longer than fifty years ago.

According to the modern management of tuberculosis, as practiced in sanitariums throughout the country, the three great fundamentals of treatment are: (1) fresh air; (2) rest; (3) forced feeding. Remember—air, rest, food.

However, even these commonplace agents require care and discretion in their employment, and much harm may be done by their injudicious application. Thus, even fresh air may be of the wrong temperature or humidity or in other properties, or it may be managed injuriously, as in the case of drafts when a patient is in a state of perspiration, or being cold air when he is heated. Many persons undoubtedly have taken cold and had their lives shortened by the routine but injudicious use of fresh air, without regard to other conditions.

So even rest should not be absolute, save in extreme conditions, but it needs to be mixed with a proper but variable amount of exercise (plus "brains"). Forced feeding is far from being an unmixed blessing, and I believe it to be in many instances a very unsafe proceeding, if not directly harmful. Not what is taken into the stomach but what is digested and assimilated is the measure of improvement. Each patient needs individual study, in order that the treatment may be adapted to his personal needs.

I am one of those who still hold to the old-fashioned notion that there are various medicinal agents that will aid greatly in the treatment of tuberculosis. Measures for the improvement of digestion frequently are called for, and when rightly used are of great value. Especially are they likely to be needed when forced feeding is the rule. Pepsin, pancreatin, papoid, and the various compound digestants many times are called for. Nuclein and lecithin are of value in strengthening the defensive forces of the system and in building up the nervous system. Iodine in its various forms, but oftenest (as a matter of preference) in the form of iodized calcium, benefits in many cases.

The Value of Creosote

A remedy in which I personally have great confidence is creosote. I can say this the more freely and strongly, because this is a remedy which has never been monopolized or even specially advocated by the active-principle medicationists. To my mind, creosote is to the respiratory organs what calcium sulphide is to the blood and tissues generally, the sulphocarbolates to the intestinal tract, hexamethylenamine to the urinary organs,

and so forth. It is both an antiseptic and an expectorant. It is of value in pneumonia in all its forms, in bronchitis, both acute and chronic, influenza, and tuberculosis. It loosens and lessens the cough, relieves irritation and promotes resolution and healing.

I have prescribed creosote in various forms, including plain creosote in pill and tablet, as carbonate of creosote (or creosotal), guaiacol, potassium sulphonate of guaiacol (or thiocol), and calcium creosote (or calcreose). Some of these are proprietary or patented preparations, and, hence, are open to boycott by the ethical purists. I do not like patented preparations, and I do not like trade-names of drugs; but, I can see that each of them has its advantages, and when I have found a remedy which benefits my patients, that fact alone outweighs all questions of ethics with me. And when a remedy has once established its usefulness in certain definite conditions of disease I prefer the original, even though it be a proprietary.

The use of creosote in tuberculosis is as old as the hills and is vouched for by a long line of our best therapeutists, from Reichenbach in 1833 down to the present time. Potter says of it that "in pulmonary tuberculosis, when well borne by the stomach and continued over a long period of time, it has probably proved more efficient than any other remedy."

Sajous states that "creosote is a valuable remedy in the first and second stages of tuberculosis, excepting those cases in which asthenia is to any degree marked." Thompson says: "The creosote treatment of tuberculosis is a curious revival, after more than sixty years, of the use of a drug which fell into disfavor after its original trial. It is, on the whole, the most satisfactory drug for tuberculosis." Bartholow writes: "Internally, also, creosote and carbolic acid, especially the former, have been used with conspicuously good results in the treatment of the several forms of consumption, except phthisis florida." Even Osler, who is very nearly a therapeutic nihilist, agrees that it "is an old remedy, strongly recommended by Addison; and the reports of Jaccoud, Fraentzel, and many others, show that it has a positive value in the disease."

Some Useful Preparations

I have had considerable experience in the use of thiocol (which is chemically the potassium sulphonate of guaiacol), principally in the treatment of pneumonia and the other acute diseases of the respiratory organs; and have come to think very highly of it. The special point in which it excels the cruder preparations is that it is not unpleasant to take and that it will be borne by the stomach in any desired dosage without creating any disturbance. I do not claim that it has any virtues other than those of creosote or its active ingredient, guaiacol; still, I consider it as one of the best, if not the best, of the preparations and derivatives of creosote. The only drawback to the use of thiocol is its high price (owing to the German patent, which must now be nearly expired).

As for calcium creosote, or calcreose, my experience with it has been much shorter and less extended. As to this preparation, however, there undoubtedly is an advantage derived from the calcium with which the creosote is combined. Clinical workers have seemingly demonstrated the theory that calcium starvation is a prime factor in the causation of tuberculosis. Lime-starved dogs fall easy victims to bovine tuberculosis, while the addition of calcium compounds to their diet cuts short the progress of the disease and they gain weight and are restored to health. (See Van Giesen and Lynah, *Medical Record*, Nov. 27, 1908, and July 1, 1909.) It is well known that calcium is essential to the formation of the fibrin element in the blood, and also that the healing of tuberculosis foci is largely a calcification process. In these facts I find the reason why calcium creosote acts so favorably in tuberculosis.

My attention was called to calcium creosote not very long ago by a medical friend who himself is a victim of tuberculosis, having suffered from repeated hemorrhages, but who still continues to do a good general practice in one of our New England cities. This doctor assured me at that time that he did not think he would still be alive were it not for the benefit which he had derived from the use of calcium creosote. So strongly was I impressed by this remark, coming from a man in whose judgment I had great confidence, that I at once began prescribing it for my own patients; and I have found it of great value.

One other method of treatment for tuberculosis remains to be spoken of, one which has been strongly advocated and as strongly condemned. This is the vaccine, or bacterin, treatment; that is, the use of the various preparations and cultures of the bacillus tuberculosis. The pendulum has swung high and swung low in relation to this much debated subject, from the days of Koch and his tuberculin, down to those of Friedman and his turtle-serum; and the question is still unsettled, with much difference of opinion

yet existing. On the whole, however, it may be said that the advocates of the biologic therapy are steadily increasing; and it seems probable that, with future improvement in the preparation and technique, this method will be generally accepted as one of the most important aids to the medical treatment of tuberculosis.

Epilepsy

The last of the chronic diseases to which I shall call your attention is epilepsy. This is a chronic nervous disease, characterized by recurrent general paroxysms appearing at variable intervals, and attended by loss of consciousness and sensation. Its principal forms are the grand-mal, or major epilepsy; petit-mal, or minor epilepsy, and Jacksonian, or cortical, epilepsy.

The theory of epilepsy generally accepted assumes the existence of a convulsion-center at the base of the brain, irritation of which will produce an epileptiform convulsion. The irritation may come from many different sources; but when once convulsions have been induced, no matter by what cause, they will be brought on more easily with each succeeding attack, until finally such changes have been wrought in the convulsion-center itself that thereafter the seizures occur at irregular intervals, without the intervention of any apparent cause.

Epilepsy does not belong to the class of self-limited, or spontaneously curable diseases. Its natural course is from bad to worse, until a fatal result ensues, either as a direct result of the disease or, more likely, from the many complications following in its wake. It is estimated that not more than ten percent of all victims are curable by any known method of treatment, while not more than fifty percent are benefited in any appreciable degree even by prolonged treatment.

You will see that these unfavorable statistics render the question of treatment of all the greater importance, and any plan of treatment which offers hope even in selected cases, worthy of careful attention.

In all cases of epilepsy, the first thing to be done is, to discover the primary source or cause of the irritation, and to remove or modify this as far as may be possible.

The most frequent exciting causes are to be looked for in influences arising from one of three directions: the digestive organs, the sexual system, the mental functions. Look out carefully for all possible sources of irritation in each of these three directions. Time will not allow me to go into detail.

If the cause can be determined, the next thing is, to remove it if possible, or, when this can not be done, to modify its effects or to render it comparatively inactive. In mild and incipient cases, no further measures may be needed to restore the patient to health; and in a large proportion of cases there will be more or less marked improvement, either permanent or temporary. If no cause can be detected (and this is often the case), we are accustomed to label such cases as idiopathic—although, strictly speaking, there probably are no idiopathic cases of epilepsy.

The second thing to be done is, to lead the patient into right habits of living, both as to diet and general hygiene. To do this, it is essential to secure the full cooperation of the patient himself. The food must be plain, simple, and easily digested, and the ordinary rules of hygiene as to diet must be scrupulously observed. Proteids should be allowed only in very limited amounts; still, I do not believe that they should be prohibited entirely.

The saltless diet is now very generally recommended for epileptics, but I have never seen any wholly satisfactory explanation of the benefits claimed for it. Indeed, in some patients it has been found that, while the paroxysms were measurably held in check by salt exclusion, yet, this was accompanied by a grave nervous condition, characterized by delirium and suicidal impulses, and all of which passed away when salt was restored to the diet. My own practice has been a compromise between the two extremes. I direct that no salt be used as a condiment, but I do not require that the food be prepared strictly without salt. This plan works satisfactorily for the patient, and saves much trouble for the family.

Moderate exercise, both physical and mental, is desirable, but all severe labor of body or mind should be strictly prohibited.

Medicinal Treatment of Epilepsy

The third indication consists in providing proper medical treatment. This includes general and symptomatic medication, of which I shall not speak further, as it is conducted wholly on general principles and needs no special description. It also includes, in those patients having a distinct aura, provision for some quickly acting means of relaxing the vasomotor spasm, overcoming the muscular contraction, and thus preventing the occurrence of the convulsion; the means to be employed at the first approach of the aura. The remedy most commonly employed for this purpose is the nitrite of amyl (pref-

erably from perles, which may be carried in the pocket), this to be inhaled at the earliest indication of the oncoming of the paroxysm.

However, the essential and important thing is, to overcome or to lessen the abnormal irritability of the convulsion-center. For this purpose, a multitude of drugs have been employed and are still being recommended. The one remedy which is almost universally used is the bromide of potassium or some other compound of bromine. But, while in some cases this is very beneficial in restraining the paroxysms, its secondary or incidental effects are unpleasant and injurious, producing depression, dulness, and mental hebetude, with partial or complete loss of mental power; while in a considerable proportion of cases no benefit is derived, the convulsions either not being affected or, not seldom, being made worse.

Under these circumstances, a study of other remedies is essential, and I shall introduce to your attention two drugs which I believe to be far superior to the bromides, as has been proved by the experience of numerous physicians during the past few years. These are, verbena hastata, commonly known as blue vervain; and solanum carolinense, the common horse-nettle.

Of verbena, I can speak from an experience extending over some twelve years or more. It is clearly a nerve tonic, and one of its earliest effects is in most cases to brighten up the mental powers of the patients and give them a more cheerful aspect. This is in marked contrast to the bromides.

Two Valuable Remedies

The class of cases in which I have found verbena to be especially beneficial includes, first, those in which the action of the bromides is distinctly unfavorable, rendering the patient worse instead of better; and, secondly, the comparatively mild cases, in which the convulsions are not extremely frequent or severe, nor are the mental faculties greatly impaired. This class includes most of the curable and a large portion of the improvable cases.

As to the preparation used, all my experience has been with the concentration, known as verbenin or (of late) verbenoid. This is prepared in tablets of 1-3 grain each, representing about 15 grains of the crude drug. Beginning with one, two or three tablets at a dose, give this dose before each meal and at bedtime. Increase by one tablet each a *day* (*not* one at each *dose*) continuing until either the convulsions are measurably controlled or signs of ill or unpleasant effects from the drug become manifest. I carry this augmented dosage, without hesitation, up to as much as six tablets four times a day, and have never met with untoward effects. In one or two cases, I have observed another result; namely, that the patient was not improved by this course, but actually grew worse. This, of course, is an indication for dropping the drug. When this occurs, I change to solanum carolinense.

The Value of Solanum

Solanum carolinense is a powerful antispasmodic and nerve sedative, and, unlike verbena, in large doses produces potent physiological effects. The general indications for its use I find in those cases where the bromides exert a beneficial effect on the convulsions (although at the same time producing secondary unpleasant effects); and, further, in all cases which resist the comparatively mild action of verbenoid. Theoretically, solanum should be of more value than the former remedy; but in practice I have found it far less frequently applicable; or perhaps I should say, I have found it to be distinctly helpful in far fewer cases than verbena.

I have given this drug in two forms; namely, the "specific medicine" of the Eclectics, and the alkaloid, solanine hydrochloride, of the Alkaloidists. The dose of the "specific medicine" varies from 5 to 30 or more drops, to be taken before meals and at bedtime. The alkaloid is prepared in granules of 1-64 grain, and the dose of these ranges from three to eight or more, taken four times a day. The rule of dosage is the same as for the other active principles: begin with the minimum dosage and increase until the desired effect is produced.

I have given only the briefest outline of the treatment which I recommend. Should any of you desire more complete details, I shall be pleased to send you reprints containing a fuller discussion and more definite instructions.

In closing, let me say, Remember that epilepsy seldom is cured. Do not expect too much. When you have found a remedy which exercises a reasonable degree of control over the convulsive attacks, do not forget that it should be continued indefinitely, varied as to dose according to the needs of the case. Never pronounce a patient cured until at least two years have passed without any return of the paroxysms.

American Medical Fraternities

The Development of Greek-Letter Societies

By Benjamin H. Frayser, Ph. G., M. D., Panama, Canal Zone

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THE companionship of good men is a thing that is interesting in study. When an organization has for its object the development of character that will make a better student of the young man while in college and a more useful professional man when he enters the arena of life, it is an institution that every member of the profession should know of. For men in our profession to champion organizations that stand for a high and clean moral standard, for intrinsic worth in the profession, and for medical ethics, is, indeed, praiseworthy.

Origin and Development

December the fifth is a date that every man in the bond of the "Greeks" should celebrate. For, on December 5, 1776, Phi Beta Kappa first saw light and became the founder of that great system of Greek-letter fraternities that mean so much to healthy college-men. It was in the Apollo Room of Raleigh Tavern at Williamsburg, Virginia, where the meeting was held, and the selected members were students of the renowned College of William and Mary, the college of Jefferson. In that same room only a few months previous there occurred one of those great oratorical outbursts by the colonial Demosthenes, Patrick Henry, who by his mighty eloquence, here displayed as well as elsewhere, had finally led the hesitating Virginians to sever relations with the mother country and thus made possible the foundation of a new nation.

In such an environment, it is not strange that the students assembled on that eventful night should have entered into a field of activity new and untried. By solemn obligations of mutual fealty, they formed a secret society, to be known to the outside world by a combination of Greek letters, initials of the name proper; the latter a motto ever to be held in inviolate secrecy. Future meetings were planned and extension of the organization to other American colleges was looked forward to.

The purposes of Phi Beta Kappa were to be the enhancement of the social side of college life and the promotion of higher culture. These embryo fraternity men adopted a grip, password, and a badge. Thus was Phi Beta Kappa conceived and organized. It should be quite an honor for the fraternity man of today to point back to the time, the place, and the men who began a movement which, in its continuity of development, has grown into the Greek-letter system of today.

Elisha Parmele of the parent chapter established chapters at Yale in 1780 and at Harvard in 1781. These chapters established another at Dartmouth in 1787, and one at Union College in 1817. As years rolled by, scholarship became the chief factor of eligibility to membership in Phi Beta Kappa. In 1831, the fanatical antisecret-society movement swept through the United States, and such great pressure was brought to bear on the chapter at Harvard that it surrendered its secret work and became an honorary scholarship fraternity. Today the Phi Beta Kappa key is a decoration for scholarship, and college men and women everywhere covet the honor.

Eight years after Phi Beta Kappa established its chapter at Union College, Kappa Alpha was founded. Kappa Alpha (Northern) it is now termed, to distinguish it from the fraternity of the same name of the South. Union College gave to Greekdom two other societies in 1827; these being Sigma Phi and Delta Phi. Sigma Phi established a chapter at Hamilton College, New York, in 1831, thus following Phi Beta Kappa in expansion. Sigma Phi's chapter at Hamilton stimulated the organization of Alpha Delta Phi in 1832, and the year following Psi Upsilon was founded at Union College. Kappa Alpha founded its first branch chapter at Williams College in 1833 and called it "Massachusetts Alpha," thus carrying out Phi Beta Kappa's idea of extension. Another body of college men founded Delta Upsilon at Williams College in 1834; no doubt prompted by the presence of Kappa Alpha.

Thus was the Greek-letter system of fraternities launched forth as a permanent feature of college-life. Today we find 36 recognized national academic fraternities, 1527 chapters, and an aggregate membership of 249,224. Among the professional schools,

we find 39 fraternities, 644 chapters, 240 lodge-houses, and an aggregate membership of 68,360.

The Professional Fraternities

The professional fraternities date back as far as 1860, when Phi Delta Phi was founded in the law department of the University of Michigan. In 1882, Nu Sigma Nu was founded in the medical department of the University of Michigan and was the first medical fraternity having a continuous existence. Nu Sigma Nu has always upheld its high standard and has established more than 30 chapters in the best medical schools of America. The alumni of this fraternity number 4375 physicians, who are organized in alumni chapters. Alpha Kappa Kappa was founded at Dartmouth in 1888 and numbers over 4500 physicians as members of the 38 active chapters. A. K. K. owns a $10,000 lodge in Ann Arbor, Michigan, and another, valued at $8500, in Galveston, Texas.

Another body of medical men organized Phi Alpha Sigma at the Bellevue Hospital Medical College in 1888. This order has always been conservative in extending its chapters and, with A. M. P. O., may be classed as an eastern fraternity. In 1889, Phi Chi medical fraternity was founded at the University of Vermont, and just five years later another medical society of the same name was organized in Louisville, Kentucky. In February, 1905, representatives of the northern and southern orders met and decided to consolidate, thus placing Phi Chi high up on the list of medical orders. In 1903, Dr. J. Ansley Griffin founded the Chi Zeta Chi Medical Fraternity in the medical department of the University of Georgia, and this order began to extend its chapters to the best medical schools in the United States. The rapid growth of this fraternity has been commented upon by the lay press more than once. Northwestern University, Chicago, has given to the medical schools Phi Rho Sigma, which ranks very high and numbers among its members many eminent members of our profession.

Other medical fraternities are: Omega Upsilon Phi, founded at Buffalo in 1894; Pi Mu, founded at the University of Virginia in 1892; Phi Beta Pi, whose Alpha Chapter was founded at the West Pennsylvania Medical College in 1891; Phi Delta, founded at Long Island in 1901, and Kappa Psi, which is a medical-pharmaceutical order.

In the homeopathic schools, we find Pi Upsilon Rho, which began in the Hahnemann Medical College, Chicago, in 1876, and Phi Alpha Gamma, which was founded in the New York Homeopathic College, March 25, 1894. Phi Alpha Gamma owns a lodge in New York, valued at $25,000.

Alpha Omega Alpha is the one national honor fraternity that exists in medical colleges. This honor-order is very much like Phi Beta Kappa, in that admission is based on scholarship alone. It was founded in the University of Illinois, Department of Medicine, in 1902, and has granted charters to some of the best colleges in our country.

OUT-OF-DOORS

By Martha R. M'Cabe

Oh, it's ho! for the fields today!
For the sweet, wide, out-of-doors!
For the air, like wine,
For the crisp sunshine,
And the asters along the way.

And it's ho! for the quiet wood!
For the flame on bush and tree!
For the stream, leaf strewn,
For the rifle's tune
And the quail with her scuttling brood,

Oh, it's ho! for the everywhere
That's out under heaven's blue;
For meadow and stream,
And the hillsides a-gleam,
And the autumn that's in the air.

JOHN CLARK RIDPATH

By James Newton Matthews, M. D.

EDITORIAL NOTE.—This poem, heretofore unpublished, was found among the effects of the late Doctor Matthews, by Mr. Walter Hurt, who has very kindly sent it to us to be printed in "Clinical Medicine." It will interest our readers to know that Doctor Matthews and Professor Ridpath were cousins, a fact which explains the strain of deep and abiding love which runs through this beautiful poem. Have you a copy of Doctor Matthews's posthumous volume of poetry, "The Lute of Life"? His verse rivals that of his old friend, James Whitcomb Riley. Shall we try to get you a copy?

A common man among us, that is true,
A common fellow-townsman, that is all,
Who casts no larger shadow on the wall
Than is the shadow thrown by me or you,—
Whose eyes than ours are not more deeply blue,
Whose strength of sinew not more great, withal;
A cordial brother, quick to come at call,
And do whatever duty prompts to do.

He walks the world with much the self-same air
Of other men,—with kindly eyes, and hands
Of gracious greeting,—planting here and there,
In some tear-channeled soul that understands,
A word of cheer, which, like a seed, expands,
And, in its own time, blossoms to a prayer.

Such the faint outline of the outer man,—
We think we know him, but we do not know;
His soul possesses what surpasses show,
A shifting kingdom we can never scan;—
His vision, like a coursing Condor, can
On virile pinions vibrate to and fro,
Across the past, and trace the darkling flow
Of destiny, through God's unfolding plan.

Not Janus gray with double-sight could see
The things that were, and things that are to be,
More clearly than the comprehensive ken
Of him, the dear historian, at whose call
Old Time's sepulchred empires rise and fall,
And tombs are emptied of their Christs again.

The playground of his fancy is the past,
His daily comrades are the gods and kings,
The prophets and the bards, whose glory rings
The universe. Upon his soul are glassed
Scenes more stupendous and events more vast
Than strained imagination ever brings;
His antique spirit, like a spectre, clings
To mould'ring shrines and temples overcast.

Tonight, he banquets in old Babylon,
To-morrow, on the plains of Marathon,
He'll meet the Persian with Miltiades,—
Or march with Rome to flay the fiery Hun,
Or, with Columbus, chase the falling sun
Behind the billows of the western seas.

Not his the politician's idle rage,
Nor polished demagogue's delusive ways,—
He reads in records far beyond their gaze,
A deeper meaning on a broader page;
Mounting the ladder back, from age to age,
He stands a-tiptoe on the farthest days,
And from their height each human stream surveys,
And maps its course, and does the end presage.

The rabble and the mob to him are but
The froth—the foam—the babble of the waves,
That fret their little lives out on the beach;
He looks beyond them where the headlands jut,
And hears the deep sea thundering in its caves
A meaning mightier than his tongue can teach.

The poet and the prophet blend in him—
The strident voices of the world he hears,
Not with the dissonance that jars our ears,
But softly as the cadences that swim
From some Arcadian valley, dewy-dim,
Or as the very music of the spheres;—
He hears the pulses of the passing years
Play thro' the planet a perpetual hymn.

And so we reverence the master-mind
That sifts the ashes of the past, and lays
Its priceless ingots in our lifted hand;
So nobly hath he wrought the tasks assigned,
That in the annals of his native land
His fame will journey to remotest days.

What Others are Doing

IS HISTIDIN A CAUSE OF ANTITOXIN URTICARIA?

An interesting suggestion is thrown out by Allen Eustis, of Tulane University (*N. O. Med. & Surg. Jour.*, April), who is making a study of the connection between putrefying histidin in the intestine and asthma as well as urticaria. Having plausibly established such an etiologic relationship, Doctor Eustis ventures a step further.

Histidin, when fermenting in the intestine, gives rise to betaimidazolylethylamin, and this in turn, upon entering the circulation, incites the itching skin-rashes. But histidin is one of the amino acids formed during the pancreatic digestion of proteids, hemoglobin yielding as much as 10 percent. Further, Vaughan found that protein introduced into the blood current is digested parenterally, generating toxic bodies.

Now, argues Eustis, inasmuch as the horse-serum of antitoxin contains proteids, while the latter contain histidin—and this, again, is so easily converted into the said betaimidazolylethylamin—does it not seem rational to assume that this poisonous compound is set free in the circulation after the injection of diphtheria antitoxin, and that thus is given an explanation of the urticaria observed to follow its administration? And he adds: "Certainly, treatment of antitoxin urticaria yields most readily to therapy based upon this idea."

PALLIATIVE SYMPTOMATIC TREATMENT OF TOXEMIC URTICARIA

Carefully observing during ten years, Allan Eustis has not encountered (*N. O. Med. & Surg. Jour.*, April) a single case of "idiopathic" urticaria in which intense indicanuria could not be established and which failed to yield to proper eliminative treatment.

However, in this connection he mentions the palliative symptomatic treatment of troublesome acute attacks that has been proposed by A. W. Swaun (*Amer. Jour. Med. Sc.*, 1913, p. 373); namely, the injection of adrenalin. This is the claim set forth: the hypodermic injection of a 1 : 1000 solution of adrenalin, followed in twenty or thirty minutes later by a second, similar, dose, as a rule will afford instantaneously complete relief from the intolerable itching, and a complete disappearance of all lesions for some four to eight hours. If this relief does not follow, one may be assured that the trouble is erythema multiforma rather than urticaria.

The fact that adrenalin locally applied will not prevent any experimental urticaria, as also because of the reappearance of the lesions after a while, the author holds, "lends weight to the theory of a toxic origin of the disease, and suggests that adrenalin acts as a hormone stimulating the cells to generation of the neutralizing substance.

DEATHS FROM POISON IN GREAT BRITAIN

Some interesting figures regarding deaths by poisoning in Great Britain are collated by *The Pharmaceutical Journal* (July 4, p. 3) from the latest annual report of the Registrar-General. According to this report the number of deaths from poisons and poisonous substances in 1912 was neither materially larger nor smaller than the average for recent years. There were 122 deaths caused by accidental poisoning with scheduled poisons, and 102 deaths from accidental poisoning with nonscheduled substances.

Of suicides there were 547, 347 being committed by taking scheduled poisons, while 200 took nonscheduled substances.

Of the accidental deaths, opium (including laudanum and morphine) was responsible for 48; carbolic acid, for 17; veronal, for 12; alcohol, for 10; ammonia, for 9; hydrochloric acid, for 8; arsenic and oxalic acid, each for 7. Mercuric chloride—which figures so largely in American deaths by poisoning—caused but 3 deaths from accidental poisoning in Great Britain during the year 1912.

Heading the list as a cause of death in suicides, we find carbolic acid, with 88 deaths to its credit; next was hydrochloric acid, with 86. Then follow oxalic acid, with 84; opium

(including laudanum and morphine), with 52; potassium cyanide, with 41; hydrocyanic acid, with 36; ammonia, 20; strychnine, 11; mercuric chloride, 10; phosphorus, 9.

A large number of other deaths were the result of a variety of poisons. In 61 suicides and in 28 accidental deaths, the nature of the poison was not ascertained.

The most interesting feature of this report, to us, is, the record of deaths from anesthetics, of which there were 283 during the year. Chloroform headed the list, with the enormous total of 117. Next followed chloroform and ether, with 24, and ether alone, with 22. The A. C. E. mixture was responsible for 5 deaths, and ethyl chloride and nitrous oxide for 2 each. Scopolamine (hyoscine) destroyed but 1 life. Of deaths from anesthetics in which the name of the agent employed was not stated, there were 102.

Plainly, the public realizes but faintly the mortality resulting from the volatile anesthetics. Compared with the 163 deaths caused by chloroform and ether, separately and in various combinations, the danger from the other anesthetics is insignificant, indeed. It is notable that scopolamine, which we believe is considerably used in Great Britain in association with morphine, as it is here, was responsible for but a single authenticated death.

INTRAPERITONEAL USE OF ORGANIC SILVER IN PURULENT PERITONITIS

After diffuse purulent peritonitis has set in, operative intervention aims to remove the source of the infection, and subsequently the physician strives to destroy any remaining nocuous agents, since, naturally, the irrigation following an operation can not be expected to remove all germs from the abdominal cavity, and it cannot be repeated. In order to meet this latter difficulty, the surgeons of the municipal hospital at Bernburg, under the direction of Professor Hagemann, have been conducting experiments, with a view to destroying the pyogenic germs by injecting directly into the abdominal cavity a solution of collargol.

The results of extended observation have been published by R. Jelke (*Muench. Med. Woch.*, 1913, No. 33), and he claims that they have been sufficiently encouraging to justify further trials. The solution employed was of 2-percent strength, from 30 to 50 Cc. being introduced into the abdomen, through the drainage opening, by means of a uterine syringe; the nozzle being made to enter all the recesses. If desired, a larger volume of a weaker solution may be injected.

This silver solution, while causing relatively little irritation of the peritoneum, is rapidly absorbed, entering into the circulation concurrently with the pyogenous noxa.

Results, naturally, cannot definitely be postulated. Many patients have would gone on to recovery without being subjected to this measure, while many when coming under observation are beyond reasonable hope. With this idea in mind, the author is convinced—and gives several examples—that quite a number have been saved who otherwise would have perished.

HEAT AS A REMEDY FOR BOILS AND OTHER ABSCESSES

The editor of *The Journal of Advanced Therapeutics* declares (see March issue, p. 97) that a modern and practical method of treating boils, felons, carbuncles, otitis media, and sinus disease is through the employment of radiant light and heat, with reflected and direct rays from an arc or incandescent lamp, making applications of an hour's duration at a time once a day, or more frequently in severe cases.

Similar results, according to this author, can be obtained in a simpler way by immersing the affected part, when possible, in hot water kept (by frequent additions) at the highest temperature that can be tolerated. For instance, when treating a felon, the finger may be kept in hot water for two or three hours continuously, and, if treatment is taken before pus formation, it is declared that the felon in every instance will be aborted.

The writer also declares it is possible to abort suppurative tonsillitis, before pus formation, as follows: After first applying a mustard plaster, a cloth wrung out of hot water is placed over the surface of which the indurated gland is felt to be the center. Over this many thicknesses of woolen cloth which have been moderately heated in the oven are applied, changing every fifteen minutes and keeping up the applications for five hours. The writer declares that by this means an early quinsy can readily be aborted.

Simple methods of treatment like these are to be commended warmly, but they should never be used to the exclusion of the indicated remedies. We have great faith in *thorough* saturation with calcium sulphide, bacterins are giving brilliant results, while eliminative

and supportive measures, with local antisepsis, are practically always indicated.

AN ANALYSIS OF PSYCHOANALYSIS

That not every clinician is carried away by the raging cult of Freud's psychoanalysis, is amplified by the position of Engelen (Duesseldorf), who discusses this topic in the *Deutsche Medizinische Wochenschrift* (1914, No. 19). Speaking of the various factors principally contributing to the reported successful cures accomplished through this mode of treatment, the author enumerates them as follows:

The gratifying "very thorough" examination of the subject; the unusualness as well as only mistily understood nature of the cure; the fascination exercised; the sectarian atmosphere attaching to the movement and its adherent; the almost religious worship paid to the emotional life, particularly of the sexual sphere, of the patient; and last, but by no means least, the high cost of the procedure; all these elements of psychoanalysis tend to impress forcibly certain natures.

However, what great harm it is possible to create by this method is illustrated by the story about a certain young woman, who had "examined into" her the conviction that black color was disagreeable and irritating. As a result, this unfortunate creature now has been made chronically unhappy by the mere sight and contemplation of her husband's black hair—a "weakness" of which she was ignorant until the dissection of her soul à la Freud had reminded her of it. Says the author: A neurotic person should not be taught to cultivate vague, muddled feelings, but, rather, should the aim be to arouse in him a strong self-consciousness and to teach him the liberating value of action.

EMETINE IN PNEUMONIA AND BRONCHOPNEUMONIA

In a paper read by Louis Rénon before the Medical Society of the Hospitals of Paris (cf. *Gaz. d. Hôp.*, Mar. 12, p. 491), he gave his experience with the use of emetine hydrochloride in the treatment of pneumonia.

Rénon administers the drug subcutaneously in 2- to 6-centigram (1-3 to 1 grain) doses. He declares that in pneumonia it has no specific action and the course of the disease is not cut short, but the temperature falls, the disease disappearing by lysis; the dyspnea is reduced, the whistling râles are rapidly replaced by large subcrepitant râles. In bronchopneumonia, the beneficial action of emetine is even more clearly beneficial. In old patients, in severe cases, under injections of from 4 to 6 centigrams (2-3 to 1 grain) of emetine hydrochloride, the temperature drops, the dyspnea diminishes, and large râles replace the sibilant râles, while the expectorate becomes more abundant and is coughed up with greater ease.

Doctor Rénon declares that the favorable action of emetine in pulmonary affections is decidedly superior to that which follows the use of ipecac, as formerly employed.

This report is strictly in line with the experience of many thousands of American physicians who for many years have been prescribing emetine for bronchial affections and have found it good. Probably equally good—or even perhaps better—results could be obtained by giving the drug in small, frequently repeated doses, to effect.

MANAGEMENT OF BURNS

If the pain and nervous excitement following a burn are considerable, John C. Plain (*Amer. Jour. of Surg.*, Mar., 1914, p. 117) secures relief by means of hypodermic injections of morphine and atropine. Usually, however, the patient can be made fairly comfortable by immersing the burned part in cold water alkalinized with sodium bicarbonate; or, in lieu of immersion, compresses wet with this solution may be used to cover the affected area.

Doctor Plain condemns two things sanctioned by the schools: first, the puncture of blisters immediately following a burn, and, second, the use of carron oil. The following line of treatment is recommended:

As soon as the patient is fairly comfortable, the alkaline bath is discontinued, the burned area and surrounding surface are sprayed or mopped with hydrogen-dioxide solution, the entire surface dried with gauze, and finally the part covered with strips of gauze previously soaked in a 2-percent solution of picric acid in dilute alcohol. The part is then covered with a thin layer of cotton held in place with adhesive straps or a roller bandage. As soon as the dressing is soiled it is removed and the part redressed as already described.

About the third day, the blisters are opened and the escaping fluid is carefully mopped away. When sloughing occurs, the dead tissue should be removed as rapidly as it becomes loosened, after which the lesion is treated with the solutions of hydrogen peroxide and of picric acid as already described.

Over the denuded area strips of rubber tissue previously immersed in bichloride of mercury solution may be imposed.

SPARTEINE: IS IT A VASCULAR RELAXANT?

We have been so accustomed to look upon sparteine as a heart tonic that the results secured by Leslie Byron Wiggs (*Old Dom. Jour. Med. a. Surg.*, May, p. 237), in a series of experiments with this drug, come to us with considerable surprise.

Testing out sparteine upon the hearts of frogs, Wiggs has arrived at the positive conclusion that, instead of its being a cardiac tonic, this alkaloid belongs to the same class as coniine and gelseminine. He says that there seems to be neither experimental nor clinical proof that sparteine has an action like or similar to that of drugs of the digitalis series, although it does produce very transitory peripheral stimulation of the motor ganglia of the vessel-walls. He contends, indeed, that it directly depresses the cardiac muscular action. It slows the rate of the heart, but at the same time it markedly diminishes the heart-tone.

Seemingly, the action of sparteine is exerted through the nervous system rather than directly upon the heart-muscle. As a result of his work, Doctor Wiggs considers that in conditions of failing heart-power sparteine is contraindicated, and that recovery here, after its administration, occurs in spite of rather than in consequence of this drug. Experiments on dogs also seem to demonstrate that sparteine is not a diuretic.

THE TREATMENT OF BRONCHOPNEUMONIA

Antipyretic drugs never should be administered in bronchopneumonia. So declares Dr. Solomon Solis-Cohen in the January number of *The Medical Times*. Ordinarily he does not use the ice pack, although it may be employed to advantage in tuberculous cases when the temperature exceeds 100° F. Sponging the entire body twice daily with tepid water and aromatics or with alcohol adds to the patient's comfort. In delicate children and the aged and feeble, hot applications (even hot plunge-baths for the children) are to be preferred.

Treatment should begin with a thorough cleaning out of the bowel; calomel, castor-oil, alkaline laxatives, and enemata being used for this purpose. Doctor Solis-Cohen also employs the bacterins and serums, and he declares that mixed bacterins may soon be developed to a point of specificity. In these cases, he prefers serobacterins. Quinine and urea hydrochloride, injected intramuscularly, is of great service. In tuberculous cases, and sometimes following measles and whooping-cough, creosote carbonate is indicated.

At the outset, in the aged and in children, strychnine, 1-250 to 1-120 grain, should be repeated at intervals of one to six hours. When there is marked cardiac or respiratory debility, the strychnine should be supplemented by atropine or camphor. For a young child, 1-2000 grain of atropine hourly is a good dose. The ammonium preparations frequently are useful. Opium ought to be employed but very rarely. Various heart tonics are recommended and should be given according to their special indications. When there are symptoms of suffocative catarrh, occasional emesis may be resorted to. Ipecac may be given by the mouth or apomorphine hypodermically. When resolution is sluggish, ammonium iodide may be prescribed.

IDENTITY OF YOHIMBINE AND QUEBRACHINE

An exceedingly interesting observation has been reported by E. Fourneau and N. T. Page in the *Bulletin de Pharmacologie* for January, these writers asserting that the alkaloid quebrachine, derived from the bark of quebracho blanco, and the alkaloid yohimbine, obtained from the bark of corynanthe yohimbe; not only are isomeric, but actually are absolutely identical.

Four salts of the two bases were examined, namely, the hydrochloride, the tartrate, sulphate, and oxalate, and their analyses of the two classes of salts proved them to be identical in every instance. The color reaction, chemical tests and optical rotation are exactly the same for yohimbine and for quebrachine.

It is said that only one other instance is on record where the same identical alkaloid has been discovered in plants belonging to entirely different plant families; the other instance being that of berberine.

This discovery no doubt will throw considerable light upon the pharmacology of this interesting alkaloid, the therapy of which now must be revised according to our new knowledge. Yohimbine, as doctors well know, has been much exploited as a remedy for sexual impotence, while the principal vogue of quebrachine is that of a respiratory stimulant.

Let us hope that the substance, under whatever name it be, will be more closely studied hereafter.

SILVER NITRATE LOCALLY FOR PERTUSSIS

A suggestive paper on the local treatment of whooping-cough is published by Doctor Ochsenius, of Chemnitz, in the *Therapie der Gegenwart* for November, 1913. He sets forth that, in its inception, the disease is a purely local infection of the upper air-passages, and that its extension downward, as well as its secondary complications, ought to be preventable by timely energetic treatment of the throat. Unfortunately, the general ineffectiveness of our therapy (despite the ever multiplying legion of remedies recommended) confirms the popular notion of (relative) medical helplessness, and, thus, keeps doctors from seeing the victims in the early stages. This obstacle doctors should strive to overcome by teaching and making good.

Logically, the progress of the disease should be stayed by destroying the pathogenic germs in the pharynx. But, the author was impressed with the fact that, originally, whooping-cough presents only the picture of a pharyngitis, and then also of rhinitis; and this suggested to him the possible utility of that old standby, silver nitrate. Lunar caustic, he reasoned, not alone would kill the bacteria, the superficial germs, but would also destroy their nutritive substratum, the mucous membrane; at all events, its astringent action would cause diminished secretion of mucus, and, hence, a decreased number of coughing attacks. Furthermore, the suggestive influence would be appreciable, also. Results, in practice, were eminently satisfactory; best, of course, when the treatment was instituted within the first or second week and the infection had not extended beyond the pharynx.

A 2-percent solution of silver nitrate is employed. Every other day the entire pharyngeal region is swabbed thoroughly, using a cotton tampon; this being continued regularly for two weeks. (For nurslings, daily treatments at first are recommended.) Then interrupt for three, five, seven days, to observe the effect. (After the first few treatments the seizures may be worse; and parents must be so advised.) At this time there often is a sudden improvement; if, however, the attacks continue, the treatments are to be resumed for a week or so. (At times, though, a single application has sufficed.) Of course, if this treatment is not begun in the earlier stages, recovery will be more protracted. However, one case is cited, that of an 18-months-old infant, which had 65 severe seizures in twenty-four hours and was cured in three weeks.

Altogether 94 children ranging from 1-2 year to 7 years and 1 of 13 years were subjected to this treatment (in 12 more it was not carried through), and 84 were cured. Virtually the only additional measures consisted in twice daily cleaning out the nose with a 1-percent (or 0.5 p. c.) solution of hydrogen dioxide, prescribing thymipin [Presumably a very recent synthetic.—Ed.], and breathing fresh air—but guarding against chilling drafts.

Ordinarily the number of seizures was little influenced during the first week, but their intensity was greatly diminished, as were also the nocturnal and the double-attacks, and secretion became less; the cough approaching more that of a catarrhal nature. The spastic stage was greatly shortened. Also, there was less vomiting; but, fluids were being largely withheld. Incidentally, the more intractable cases were those where there existed an exudative diathesis, these subjects also tending to develop pneumonia.

In addition, the author endeavors to impress his readers with the importance of suggestibility as a factor in the cure and the prevention of the disease. He cites one robust mother who said, "For the whooping-cough, there belongs the horsewhip;" the idea being that these children will cough imitatively, by habit, and because of the sympathy cherished. Because of the "psychic infection," hospital treatment always is less satisfactory, and it is advisable to isolate the victims. Further, while silver nitrate in the throat will act as a germicide prophylactic, the children affected will restrain the injurious coughing if told that, the less they cough, the sooner these nasty swabbings will cease. The same is true for the vomiting.

In conclusion, Doctor Ochsenius points out the error of treating pertussis in a routine way, instead of individualizing in every case, reminding that neuropathic children are the more susceptible. He, further, subscribes to the growing belief that the disease is not a specific one, but, like pneumonia, merely a clinical collective conception; quoting Czerny as one authority. In support, he cites the frequent observation that adults have suffered from a plain catarrh, and then their children, positively not exposed to infection, contracted typical pertussis.

This method of treatment suggests, also, the internal use of silver iodide in pertussis, which has been recommended in these pages. In conclusion, we wish to call attention again to calcium sulphide, which is the best *single* drug for whooping-cough with which we are familiar. Next comes atropine.

TWO TYPES OF INFANTILE DIARRHEA

While many acute disturbances of the gastrointestinal tract in children arise from errors in feeding or a temporary inability of the individual infant to digest its food, we now know that there are many cases of a severe type, in which we have to deal with a serious bacterial infection. Diseases of this character are just as truly infectious diseases as are typhoid fever or pneumonia.

As Richard M. Smith says, in *The Boston Medical and Surgical Journal* (Nov. 20, 1913, p. 756) diseases of this type generally are characterized by a sudden onset after a short incubation period; rise in temperature, often to 104° or 105° F.; prostration, sometimes amounting to collapse; vomiting and diarrhea —both beginning early — the stools often containing pus, blood, and mucus; together with such nervous symptoms as twitching, restlessness, and convulsions. In the severer cases, there are marked loss of body-fluids, depressed fontanelles, hollow eyes, dry skin, sunken abdomen, and modified breathing.

From a study of these severe infectious diarrheas, Doctor Smith concludes that there are at least two fairly common types. Of these, the first is caused by the dysentery bacillus, either of the Shiga or the Flexner type. This dysenteric variety has received the greatest amount of attention. In the second variety, he believes, the gas-bacillus is the causative factor.

The symptoms of these two varieties, however, are so much alike that it is exceedingly difficult to differentiate them by clinical symptoms alone. A study of the stools, therefore, is essential to a thorough understanding of the case and, according to the deductions of Doctor Smith, also to the most intelligent treatment.

The dysentery bacillus, as Kendall points out, when grown in media containing an excess of carbohydrates, utilizes these first and as long as carbohydrates are present it appropriates only enough of the proteid material in the intestine to satisfy its nitrogen requirements. Under the circumstances, the larger the percentage of carbohydrate present in the food, the smaller the percentage of toxins produced because the proteins are not then attacked.

The gas-bacillus, on the contrary, will continue to multiply almost indefinitely in the presence of carbohydrate food, since it generates very little acid and, therefore, its reproduction is not self-limited.

Doctor Smith's conclusions, accordingly, are that, when the infection is of the dysentery-bacillus type, the patient will do badly on protein feeding and well upon a generous carbohydrate diet. In infections of the gas-bacillus type, on the other hand, the patient will do well on a diet low in carbohydrates, though relatively rich in proteins. In the latter cases, the patients do best upon soured milk, which is a food of low carbohydrate and high protein composition, while in addition containing lactic acid—the latter detrimental to the development of the gas-bacillus. Doctor Smith declares that its beneficial action on patients ill with gas-bacillus infection has been proven conclusively.

To the general practitioner, the moral is—examine the stools. Ascertain what bacteria are present in the discharges. If you are not able to do this yourself, get someone, who knows how to do it for you.

THE TREATMENT OF PYORRHEA AND FURUNCULOSIS

The treatment of Riggs' disease (pyorrhea) has been notoriously unsatisfactory. While local applications, together with internal medication for the associated acidemia, have given quite satisfactory results, even this method is far from ideal. The same may be said of autogenous bacterins, which, while they may relieve some cases, as a rule do not seem to be highly curative.

These facts give special interest to a paper by F. Tweddell in *The Medical Record* (July 4, 1914, p. 16). Doctor Tweddell has had such good results in the treatment of furunculosis with teaspoonful doses of powdered sulphur three times a day that he decided to extend this method of treatment. He finally rejected the sulphur on account of its manifest disadvantages, substituting dilute sulphuric acid therefor, giving the latter in 30 to 60 minim doses, diluted in two to three ounces of water, three or four times daily, the mouth to be well rinsed immediately after taking each dose.

The effect of this medication upon boils and carbuncles was astonishing in every instance. He therefore decided to try the

same method of treatment in pyorrhea. He describes in detail its application in one such case. The patient had already had two teeth extracted and the right lower molar was very loose and very sensitive, so that the patient could not masticate his food properly. The surrounding gum was inflamed and there was a discharge of pus from the gum border, while the gums around every tooth showed inflammation and pus could be expressed.

This patient was placed upon the sulphuric-acid treatment, in the manner already described, and, when he visited his dentist four days later, the loose tooth was found firm, the inflammation had subsided and the discharge of pus had ceased.

Doctor Tweddell says that several cases of pyorrhea alveolaris have been treated in the same way and all have been benefited. However, the teeth remain very sensitive to cold liquids, owing to retraction of the gums.

Doctor Tweddell says that small doses of sulphur are of no value, and if improvement does not occur within 48 hours, then the dose should be increased. How the remedy acts he does not undertake to explain, although he believes that the circulation of sulphur trioxide in the blood somehow exercises a bactericidal action. Of course, the patient who suffers from pyorrhea alveolaris should consult a dentist, and we may also add that of course the physician should correct any underlying faulty metabolism, such as acidemia, which usually will be found present.

It will be interesting to know just what could be accomplished with very large doses of calcium sulphide in cases of this character Here is an interesting field for clinical investi gation.

EMETINE TREATMENT OF PYORRHEA

At the last meeting of the Pennsylvania State Dental Society, Dr. M. T. Barrett, of the Dental Department of the University of Pennsylvania, reported some exceedingly interesting work upon pyorrhea undertaken in collaboration with Prof. Allen J. Smith, of the Department of Pathology of the university. This work is reported in the August, 1914, number of *The Dental Cosmos* (p. 948).

Careful examination was made of the gums and pericemental tissue in forty-six persons suffering from pyorrhea of various degrees of severity. In everyone of the cases examined, Barrett and Smith found amebæ present in the patient's mouth, all in a state of active motility. While they have not as yet identified them accurately, they believe that at least two species have been isolated in the contents of the pyorrhea-pockets.

In considering methods of treatment, the authors thought it worth while to use emetine in these cases of pyorrhea. This remedy, as has already been stated in these columns, was introduced by Leonard Rogers for the treatment of amebic dysentery, and its introduction into the therapy of that disease has been followed by brilliant success. Barrett, therefore, determined to give it a trial for the cure of pyorrhea.

For the purpose indicated, the emetine is employed locally. At first a 1-percent solution of emetine hydrochloride was injected into the pockets around the affected teeth; but this seemed to produce a transient irritation of the gums, and, so, the solution subsequently used was one of only 1-2-percent strength. To use, the needle is forced down into the pocket, the point passing directly into the wall, and, as it is being withdrawn, the cavity is left filled with the solution.

Thus far 13 individuals have been treated with emetine in the manner described. In several of these, the pus disappeared completely, to gross inspection, within twenty-four hours after the application was made, and in every one of the thirteen cases this result was obtained after three daily injections. At the same time the tissues took on a more and more healthy appearance, the teeth became firmer, and the gums settled down more tightly about the roots of the teeth.

In none of these cases have the amebæ been found after the second or third treatment. Usually, it seems, complete apparent cure has been obtained after five or six such treatments, although the remedy has not been tried long enough to demonstrate positively that the cure is a permanent one.

Three of the cases are described by Doctor Barrett in detail. In all of these the patient's gums, following treatment, were left in an apparently normal, healthy condition.

This method of treatment is so simple and so easily applied, and it promises so much for the relief of persons suffering from pyorrhea, that we hope it will be given an exceedingly careful trial by the many thousand readers of CLINICAL MEDICINE who have an opportunity to see cases of this character.

There is not a single community in which there cannot be found numerous persons suffering from pyorrhea alveolaris. While these patients usually go to the dentist (and should do so), there is no reason why the

family physician should not give this promising method a trial, if he desires to do so. The ordinary 1-2-grain ampules of emetine hydrochloride, containing 1 Cc. of liquid, are very convenient for making these applications. The contents, however, should be diluted by the addition of 5 parts of distilled water, in order to have the 1-2-percent strength solution advised by Doctor Barrett. We hope that many of our readers will give this method of treatment a good trial and report results.

WRIGHT'S SOLUTION AS A SUBSTITUTE FOR ANTISEPTIC SOLUTIONS

The use of powerful antiseptics, such as bichloride of mercury, seems to be going out of fashion. Phenol, the mercury salts, and other powerful chemicals of this kind are irritating to the tissues, sometimes destructive, and produce conditions unfavorable to rapid wound recovery, besides being attended by complications resulting from absorption, as also the not inconsiderable danger of their being swallowed, by mistake, for other less harmful substances.

G. K. Dickinson, in *The Medical Record* (June 20, p. 1124), is inclined to reject all these powerful antiseptics, substituting therefore some harmless agent. For the last two years he has employed exclusively, in the treatment of wounds, Sir Almroth Wright's citrated isotonic solution, the formula of which is as follows:

Sodium citrate	Gm. 0.5
Sodium chloride	Gm. 3.0
Distilled water	Gm. 100.0

Doctor Dickinson declares that in the thirty-seven years in which he has been doing surgical work he has never seen such prompt wound recovery as follows the proper application of this solution. The sodium chloride in this solution produces a mild hyperemia, favoring rapid repair, while the citrate of sodium keeps the wound free from deposits, allowing of the permeation of nature's healing serum. The accumulation of dead leukocytes and decomposing serum, which serves as a culture-medium for microbes of all kinds, is liquefied and quickly removed. Thus, the wound is kept clean, granulation takes place rapidly and small sloughs of all kinds separate without delay.

The Wright solution is applied on gauze, which must be kept constantly wet with it in order to obtain the best results.

Doctor Dickinson asserts that the Wright solution is of great value in the treatment of boils and carbuncles. For instance, a huge carbuncle on the neck was incised, then dressed with gauze which was kept very wet with the Wright solution, the dressing being changed frequently. Improvement was much more rapid than ordinarily occurs.

The same solution is used in the treatment of erysipelas and lymphangitis; it may also be employed as an irrigant (at a temperature of 110° F. or more) in the treatment of vaginitis, septic endometritis, and in infected wounds following gall-bladder surgery.

Dickinson is of the opinion that the sooner the profession relegates the chemical antiseptics to the background and follows out the ideas promulgated by Wright, the more sensible and the more successful the future treatment of surgical cases will become.

BOLDO: A NEGLECTED REMEDY

That we have in the South American plant boldo a remedy of exceeding value, and one that is not used nearly enough, is brought out with clearness in an article by Dr. Lucien Mayet in *La Province Medicale* for July 18 (p. 316). This drug consists of the leaves of boldoa fragrans (or peumus boldo, as it is sometimes called), a little tree (from 10 to 20 feet in height) which is very common in Bolivian and other South American forests. In Chili, the infusion of the leaves is regarded as useful, having digestive, carminative, and diaphoretic properties, while it is considered peculiarly efficacious in the treatment of hepatic disorders.

Boldo leaves contain about 2 percent of a volatile oil, a glucoside known as boldo-glucin, and an alkaloid, boldine, upon which latter its therapeutic virtues principally depend. However, it may be added that boldo-glucin is believed to possess narcotic properties, while the boldo-oil has recently been demonstrated to be of value as a vermifuge.

Of special interest, however, is the alkaloid boldine, which is a white powder of very bitter taste, slightly soluble in water and very soluble in alcohol and ether. According to Mayet, this alkaloid has a decided stimulant action upon the hepatic function, and is indicated in the treatment of all chronic infections of the biliary tract, in intestinal indigestion due to hepatic insufficiency, in hepatic congestion, and in cholelithiasis.

Doctor Mayet says that the action of boldine is not immediate, and in order to obtain lasting therapeutic effects it is necessary to take this remedy continuously for a

considerable period. There seems to be little doubt that boldine is one of the most valuable remedies for diseases of this type at present at our command, and it seems unfortunate that physicians generally are not more familiar with its properties and do not resort to it more frequently.

FORMULA FOR FRIEDENTHAL'S MOTHER-MILK SUBSTITUTE

According to Leo Langstein, of the Kaiserin Augusta Victoria-Haus, Berlin (the institute for combating infant mortality in the German Empire), Friedenthal must be awarded the credit of having practically solved the problem of devising a lacteal mixture theoretically approaching in composition as nearly as possible human milk. The main objection that can be raised against it is its relative costliness; nevertheless, Friedenthal has pointed the way along which to proceed further. We quote the formula as printed in the *Therapeutische Monatshefte*, No. 7, page 483, as follows:

Skim-milk	Cc. 330.0
Water	Cc. 660.0
Milk-sugar	Gm. 58.0
"Compound dairy salt"	Gm. 1.8

(The "dairy salt"—known as "molkereizusatzsalz"—has this composition: potassium chloride, Gm. 2; dipotassium phosphate, Gm. 1; monopotassium phosphate, Gm. 1.)

When the sugar and salt are dissolved, pass the mixture through a centrifuge three times in succession. Then add to it sterilized heavy cream in such proportion that the finished product will contain 4.5 percent of pure milk-fat. Then set aside in a refrigerator. It may be pasteurized, if to be kept for any length of time.

For use, this milk is not to be boiled or to receive any additions, but is warmed to 40° C. before being fed to the babe. The taste is agreeable and as a rule infants take it readily.

FACTS AS TO FRIEDENTHAL'S MOTHER-MILK SUBSTITUTE

Friedenthal's mother-milk substitute (composition of which is described in the preceding abstract) is fully discussed (*Ther. Monatsh.*, July, p. 480) by Leo Langstein, of the staff of the Berlin Institute for the Prevention of Infant Mortality in Germany. Comparative experiments on a large scale proved this milk-mixture as superior, on the whole, to the more popular milk substitutes; at any rate, in the case of prematurely born infants, including such as weighed less than 1500 Grams, down to as low as 1000 Grams.

The general condition of the feedlings was good; at least nothing untoward developed, any casual complication being of an infectious nature. Nevertheless, after a while irritation of the gastrointestinal tract is likely to make its appearance, when the stools are lienteric; but this need not perturb one. Doctor Bahrdt, who has been in charge of this work, holds this mixture as far better than milk for healthy infants deprived of the breast, as well as for those convalescent, weakly or exposed to infections.

The outstanding feature of this preparation is that it supplies to the child the same amount of fat and as much as it gets in breast-milk. This seems anomalous, for, both of these nutrients really are taboo, as primarily responsible for nearly all acute digestive disturbances in children. However, it is anomalous merely in appearance.

For a long time Langstein—so he declares—has been protesting against the prevalent practice of picking out one component of an article of food and then discussing its virtues or harmfulness as an agent in artificial infant feeding. This is wrong; for, a given compound food must be considered as a whole, enquiring as to the correlation subsisting between the individual nutrients and between the salts and the nutrients. And it is this happy correlation that renders it so useful. It is exactly the peculiar composition of the whey that explains the digestibility of such large amounts of fat as well as sugar.

RELATION BETWEEN IMMUNITY AND DIET OF CHILDREN

As a result of modern research, medical effort now is directed toward augmenting immunity through regulated diet; particularly in the case of infants, whose chief enemy now is known to be bacterial invasion. With this fact in mind, the experiments of Weigert were repeated by Hornemann and Thomas at the Augusta Victoria-Haus (Berlin), and Leo Langstein—the director—refers to their observations in the *Therapeutische Monatshefte* for July.

Pigs of the same litter were placed upon a standard fattening diet, augmented by a percentage either of carbohydrates, fat or proteids, respectively; simultaneously they were infected with tubercle bacilli. The eventual microscopical examination of their carcasses revealed a startling condition; namely: Those animals that were on the carbohydrate

diet were the most thoroughly infected; those on the fat diet were infected in a less degree, but, still, considerably so; while those on the proteid diet showed a low grade of infection.

This, according to the author, only corroborates clinical experience, in demonstrating the peculiar importance of a diet rich in albumin as a prophylactic against tuberculosis, as well as for preventing its progress in an affected person. The reason for this as yet is obscure, but Langstein hopes that his continued experiments may throw light upon this problem.

THE NOURISHMENT OF INFANTS IN GASTROINTESTINAL DISTURBANCES: LAROSAN-MILK

For several years albumin-milk has been the favorite in the dietetic management of gastrointestinal disorders of infants, according to Leo Langstein (*Ther. Monatsh.*, July, p. 480); who, moreover, considers the original Finkelstein-Meyer preparation vastly superior to all other similar ones. For various reasons, however, Langstein is inclined now to confine its use to the more serious cases of infantile diarrhea, in all others giving preference to larosan-milk; the latter, for one thing, being more convenient to get ready.

When fed larosan-milk, the author asserts, infants suffering from diarrheas of mild or moderate degree are quickly cured and gain in health and weight. Besides, this regimen may be continued for many weeks without giving rise to loss of appetite or other complications.

However, not alone is this preparation of service in the zymotic disturbances of digestions, but it is advantageous to add it to the regular nourishment of those normally breast-fed infants who have diarrhea from no assignable cause. Here, it is asserted to be superior to plasmon and nutrose, as well as to food containing an addition of calcium. When properly prepared, larosan-milk has the same composition as the albumin-milk.

VACCINE THERAPY OF TYPHOID FEVER

While the voice of the profession is unanimous in declaring prophylactic vaccination against typhoid fever of great value, it is by no means so decided in regard to the value of the bacterin treatment of the disease when once it is under way.

Albert A. Horner (*Boston Med. a. Surg. Jour.*, June 25, p. 986) has made a study of 135 cases of typhoid fever, comparing 40 cases in which the bacterins were not employed with 95 cases in which they were. These patients were all treated in the service of the Boston City Hospital.

It was found by Doctor Horner that the average duration of the fever in uncomplicated cases treated with bacterins was 24.39 days, while in uncomplicated cases in which vaccines were not employed it was 23.08 days. Inoculated patients presented 55 percent of complications; the noninoculated, 50.5 percent. The mortality among the vaccinated patients was 10 percent; in the unvaccinated, 11 1-2 percent.

Without going into all the details given by Doctor Horner, we may say that the evidence which he submits is not conclusive. In the patients whom he treated, the use of bacterins did not seem to modify greatly the course of the disease; but this may be owing to defects in his technic, as he himself seems willing to admit, since he reports the experience of Meakins, of the Royal Victoria Hospital at Montreal, who obtained most excellent results with vaccines, both the death rate and incidence of relapses being reduced, as compared with the cases in the same hospital not so treated.

The exact value of bacterins in the treatment of typhoid fever has not as yet been determined. The reports of different physicians are extremely at variance. On the whole, we certainly do recommend their use as likely to do good, and not likely to do harm. However, our real dependence should still be: proper feeding, correct nursing, and the intelligent and faithful administration of the intestinal antiseptics.

LOCAL ALCOHOL INJECTIONS IN COCCYGODYNIA

At the meeting of the American Proctologic Society held at Atlantic City in June, Dr. Frank C. Yeomans, of New York, read a paper in which he presented a new method of treating coccygodynia, which he confidently predicts will render this painful and intractable condition quite readily amenable to treatment.

The method recommended is based upon the suggestion made by Schlosser, in 1907, for the treatment of trifacial neuralgia and other sensory-nerve ailments, and consists in the injection of 70- to 80-percent alcohol. The technic is simple, and the operation can

be performed in the physician's office, without anesthesia, although under strict aseptic precautions.

The bowels having been emptied thoroughly, the patient is placed upon the table in the Sims' position, and the area of the skin over the coccyx painted with tincture of iodine. A 2-Cc. Luer or similar syringe, provided with a 2-inch needle, is filled with 80-percent alcohol.

The right index-finger is now inserted into the rectum and the point of maximum tenderness is determined by pressure with the finger on the inside and by counter pressure with the thumb on the outside. When the point of greatest tenderness is determined, the needle is introduced through the midline direct to the painful spot, and 10 to 20 minims of the alcohol are injected slowly. The finger is kept in the rectum as a guide and to guard against puncture. After the injection the needle is withdrawn and the point of puncture sealed with collodion.

The pain of injection lasts a few minutes, followed by a dull ache, which may last a day or two. Three to five injections usually are required, made at intervals of about one week.

Doctor Yeomans reports seven cases of coccygodynia, all occurring in women, which were treated in this manner. Four or five injections were given to these patients at weekly intervals. Relief was prompt and complete, and all the patients have remained well thereafter.

EFFICIENT VACCINATION

"The manner of combating opposition to vaccination," says Dr. Edmond F. Cody (*Boston Med. a. Surg. Jour.*, Mar. 12), "is, to vaccinate well." Accordingly he devotes considerable attention to a study of the technic of various sanitary authorities.

Essential to an understanding of the proper technic is the mental picture of typical vaccinia. This, Doctor Cody says, usually appears about as follows. In people previously unvaccinated, the eruption begins as a papule seventy-two hours after inoculation; on the fifth day it is a well-developed vesicle; on the seventh day, the vesicle has reached maturity, when it is flat, umbilicated, and surrounded by a rose-red areola. At this stage, it is, to quote Jenner, "exactly like a section of a pearl on a rose-leaf." The vesicle begins to crust on the eleventh day, and this crust is exfoliated from the twenty-first to the twenty-eighth day, and finally leaves an indelible characteristic scar, first red, later becoming white, sharply defined, with distinct pitting.

Now with regard to the technic: Various men were consulted, including Rosenau of Harvard, Emerson of Tufts, Love of the U. S. Army, Stokes of the U. S. Navy, Kerr of the Public Health Service, Sir William Osler, Theobald Smith, Simon Flexner, A. H. Doty, and John H. McCollom. With the exception of Doctor Doty, practically all these men recommend either two or three scarifications. Cody quotes Dr. John H. McCollom as saying: "Three reasonably good scars is a fairly sure indication of protection, but the mistake must not be made of thinking that because a person has a large scar it is an indication of a successful vaccination."

As fairly typical of the technic generally recommended, we give here that employed in the U. S. Army. It is as follows: First the area is cleaned with green soap and alcohol and then dried with cotton or gauze. Three abrasions are made, one inch apart, the instrument employed being an ivory point or a sterile scalpel. (Most of those consulted used simply a sterile needle.) The bandage consists of sterile gauze by preference. This is changed as often as necessary to keep the part clean.

Most of those consulted advised against the use of vaccination shields, preferring simply sterile gauze or bandages. Doctor Cody himself says: "I mention the shield, only to condemn it. It is bulky and invites violence. It often becomes loosened and scrapes the vesicle; it prevents radiation and produces the effects of a poultice; and among the poor it is loaned about to different children, often heavily coated with purulent secretions."

Doctor Cody further advises that the patient should be directed to return to the physician within seven days, or earlier than this should constitutional or severe local symptoms appear. At this time the dressing should be removed and the physician should look for the "section of pearl on a rose-leaf." If this is present, a bland ointment with sterile dressings is applied, and the lesion is thus cared for until it is dry. The certificate of vaccination should not be given until the typical scar is apparent.

How frequently should we revaccinate? Doctor Cody quotes the statistics of Kitasato, Lescohier, and Millard, which seem to indicate that the protection is much shorter than

most people believe to be the case. In one-half of those vaccinated, it is exhausted within five years, and in the remainder probably at the latest about the tenth year. Therefore, the inference is that every person should be revaccinated every five years, or, at the latest, every ten years.

THE DESTRUCTION OF THE FLY—A NEW AND CHEAP METHOD

To destroy the fly by "swatting" may be effective so far as the individual fly is concerned, but it does not have much effect upon the multiplication of flies. Plainly, the only remedy for this evil is to stop insect reproduction, if possible. That this can be done has been proven by Cook, Hutchison, and Scales, of the U. S. Bureau of Entomology, who have been conducting some elaborate experiments, which are reported in Bulletin No. 118 of the U. S. Department of Agriculture, just issued.

As everybody knows, the fly breeds in foul p'aces, but principally in stable-manure, the natural habitat of by far the greatest numbers of these insects. The fly is attracted to the manure, possibly by its odor, and when ready to lay its eggs crawls an inch or two beneath the surface, where it deposits the eggs. These hatch within one day. Next follows the larval, or maggot, stage, which lasts for four or five days. The larvæ migrate to the sides of the manure pile, and toward the base, feeding on the manure during their journey. They are then transformed into pupæ, which within a few days are found congregated on the outer edge of the manure, near the ground. In about ten days from the time the eggs are laid, the brood of young flies emerges from the manure pile.

What an enormous number of flies may hatch out of horse-manure is shown by Miss Sallie Lambeth, who, in *The Journal of the Missouri State Medical Association* for July, 1914, page 20, has reported some interesting investigations as to the number of larvæ and pupæ in a pound of manure. In this quantity she found the equivalent of 1200 house-flies in the developing stage.

The government experiments were all made with 8-bushel quantities of manure. Cook and his coworkers experimented both in the open air, on piles, and on screened-in cages. These experiments included not merely the determination of the effect of various insecticides upon the development of the fly, but also how the chemicals act upon the manure itself; the latter, of course, being too valuable as a fertilizer to be injured for agri cultural purposes.

The following substances were tried, but for one reason or another were found unsatisfactory: kerosene emulsion, kainite, the Isthmian-Canal-Commission larvicide, ferrous sulphate, potassium cyanide, calcium cyanamide, pyroligineous acid, sodium chloride, copper sulphate, the lime-sulphur mixture, paris-green, and ammonia gas liquor.

Of all the substances employed, by far the most effective, economical and practical was found to be borax or the analogous calcined colemanite; the latter being crude calcium borate. Both of these substances are markedly larvicidal, and in the amounts required to destroy the flies, eggs, and larvæ do no permanent harm to the manure; indeed, when added in small quantities, the borax seems to prevent "firing" of the manure and to increase the percentage of nitrites and nitrates, without interfering with the normal fermentation.

Without going into details as to the exact effect of the borax and colemanite upon the eggs and pupæ of the fly, as found in the manure which has been treated, in comparison with the manure which has not been treated, it is sufficient to say that in nearly all experiments in borax-treated manure fully 99 percent of the larvæ were destroyed Not only does borax kill the fly-maggots, but also it has a toxic effect upon the eggs, which do not hatch after contact with this chemical. The calcined colemanite, being largely insoluble, is not quite as toxic to the eggs, its poisonous action being exerted mainly upon the larvæ.

The proportion of the borax and calcined colemanite required for the effective treatment of manure is relatively small, 0.62 pound of borax and 0.75 pound of calcined colemanite being sufficient for the treatment of 8 bushels (10 cubic feet) of manure.

The borax is applied dry by means of a fine sieve, particularly around the outer edges of the manure pile. When thus powdered on, 2 or 3 gallons of water are sprinkled over the manure so treated. The calcined colemanite is used in the same manner. Each addition of fresh manure to the pile must be similarly treated.

The borax treatment may also be employed for garbage-cans or -boxes, and applied to floors and crevices in barns, stables, and markets, as well as to street sweepings. Water should be added in every instance, as for horse manure

The expense of this treatment is small. Borax can be purchased, in 100-pound lots, in Washington at from 5 to 6 cents a pound, this making the cost of the borax treatment practically but 1 cent per day per horse. If the calcined colemanite is used, and purchased in large shipments, the cost is about 2 cents per pound, so that the expense of treatment with this product is considerably less.

BENZOL IN DISEASES OF THE BLOOD

For some time the therapeutic influence of benzol, with especial reference to hemic dyscrasias, has been under investigation at the hands of European clinicians, among these Királfy and Korányi. Among the more recent reports is one from the imperial hospital at Vienna—H. Schlesinger, director—as presented, in a clinical demonstration before the Society for Inner Medicine (Vienna), by F. Tedesko (*Wien. Med. Woch.*, No. 2, 1913), for the physicians in charge of the case, viz., v. Noorden and W. Falta. [The benzol here spoken of is also known as benzene, and must not be confused with benzin or gasolin. It is also well to bear in mind the toxicity of benzol, or benzene, for the properties of which the reader is referred to recent textbooks.—ED.]

While heretofore benzol has been employed mostly industrially and in the laboratory, and in medicine has found limited application as an external and internal antiparasitic, and still less in certain pulmonary troubles, recent investigators ascribe to it a direct influence upon the hematopoietic apparatus. That is to say, benzol is claimed to affect the various blood-cells numerically as well as qualitatively.

Thus, according to Tedesko's presentation, benzol beneficially influences the generation of the erythrocytes, as was strikingly observed in a case of posthemorrhagic anemia incident to abortion. But more particularly does it act upon the luekocytes, controlling their count and improving their quality; the latter effect being equalled only by arsenic, with reference to leukemia, However, as to the red blood-corpuscles, the agent acts more intensively in their generation, as well as in their liberation (*ausschwaemmen*), at least in leukemia.

All in all, the action of benzol, it is claimed, seems to be directed to the blood-forming centers, including those (supposititious) "locks" or "gates" (*schleusen*) which control the passage of the cell-elements into the circulation. Benzol, hence, removes or overcomes derangements of the hemapoietic organs—though, whether permanently or only temporarily, remains an open question.

The case specifically under consideration is that of a woman of 53 who three years before (while previously healthy) became afflicted with enlarged glands of the neck and axillæ, followed by dropsy of the legs and abdomen. After a brief treatment she left the hospital, to resume housework, but returned August 3 of last year, exhibiting marked increase of her original conditions, besides cyanosis.

The woman was in a deplorable state. Because of the enormous ascites, the spleen could not be palpated, but the blood-count showed as follows: 975,000 erythrocytes; 120,000 leukocytes, 95 percent of which were mononuclear (among them 12 percent large lymphocytes), the other 5 percent being polymorphic neutrophile leukocytes; no narrow-elements; no nucleated red corpuscles.

At the start the patient was given, by mouth, 30 to 40 drops of benzol three times a day, which soon after was changed to a mixture of equal parts of the drug and olive oil dispensed in capsules, the full daily dose finally reaching 3 Grams. The remedy was well borne. The first effect was the increase of the leukocytes, to 160,000 (a result already observed by Korányi); but they soon diminished, so that by October 21 (after ten weeks' treatment with benzol) they numbered only 11,000. However, the relative percentage of the different leukocyte forms remained unaltered.

Very remarkable, in addition, was the excellent effect of the benzol-therapy upon the red blood-cells, these having risen from 975,000 to now 3,700,000, with an augmentation of the hemoglobin-content to 69 percent, from the original 31 percent. All clinical conditions were modified correspondingly, the general well-being showing striking improvement. By September 7 the hydroptic phenomena had disappeared and the patient was able to leave the bed without exertion.

Then, the middle of October, a complication intervened, in the form of a streptococcic purulent enlargement of the neck-glands and a general pyogenic infection; the febrile state becoming so acute that the benzol was temporarily interrupted. The course of this incident is not essential here; but eventually the festering gland (now of child-head's size) was opened and healed, after which rapid improvement set in, with resumption of the benzol-treatment.

In spite of the severe febrile complication and long-continued wound discharge, the benzol now, in the words of Dr. Tedesko, in an astonishingly short period developed truly marvelously brilliant therapeutic effects. Thus, on November 24 the blood-count demonstrated the presence of 2,350,000 red and 3750 white blood-corpuscles. The patient felt well and stronger and the wound was healing nicely. The leukocyte formula still remained unchanged; on December 9, however, the reading was: erythrocytes, 3,808,000; leukocytes, 6400; hemoglobin, 60 percent; color-index, 0.9.

As a feature of especial noteworthiness, the attending physicians look upon the alteration of the blood in its qualitative composition. Thus, while in the beginning the mononuclear cells were almost exclusively (95 percent) dominant, these elements now gradually receded; the latest count (December 17), for example, showing 3,722,000 erythrocytes and 4800 leukocytes, the latter of which consisted of mononuclear forms to the extent of 48 percent, with 10 percent lymphocytes among them. This latter result set in only three weeks after cessation of the fever and resumption of the benzol therapy—hence, a direct result, without a doubt. In this respect, Dr. Tedesko holds, benzol differs materially from the other symptomatic remedies for this disease.

However, in strong opposition to the enthusiastic advocates of this new benzol-therapy, there are those who pronounce this agent both useless and harmful; among their number being Dr. Pappenheim and Dr. J. Sohn. The latter has contributed an article to the *Wiener Klinische Wochenschrift*, being a study of the influence of benzol upon metabolism, and on leukemia specifically.

Sohn's trials were with one myeloid leukemic patient and with three nonleukemic individuals.

He administered the benzol to the amount of from 4 to 5 Grams per day, for three to five days in succession. Tests regarding the metabolism indicated: increase of neutral sulphur, in relation to the sulphates, to 20 or 30 percent, from the normal 7 to 15 percent; diminution of the urea-nitrogen relatively to the total nitrogen; slight increase of ammonia; in three instances there was urinary albumin.

Since the drug may give rise to nausea, eructations, loss of appetite, even hematemesis, its use is dissuaded from, especially in larger and prolonged dosage; it being argued that the single definite action—diminution of leukocytes in anemia—does not counterbalance the disadvantages, the more so, as it seems to be more apparent than real.

Since the preceding was written a number of favorable reports on benzol have appeared, one by Dr. Frank Billings, of Chicago.

BACTERIN TREATMENT OF ACUTE RHEUMATIC ARTHRITIS

While rest in bed, restricted diet, salicylates, and local applications of (synthetic or natural) oil of wintergreen and camphorated oil (combined) are all of value in the treatment of the acute rheumatic arthritides of children, W. C. Wolverton (*Merck's Arch.*, July, p. 206) becomes particularly enthusiastic when he discusses the use of bacterins in this disease. He declares that a polyvalent stock streptococcus vaccine has given him uniformly satisfactory results, so that he has come to ook upon favorable or unfavorable reaction to this remedy in cases of this character as a "therapeutic test." Since we are not, as a rule, absolutely certain as to the exact variety of the streptococcus present in any given case, he employs a mixed bacterin containing several strains of streptococci, together with the staphylococcus aureus and albus and the pneumococcus. This mixture is the well-known van Cott bacterin.

In every case in which he has employed this mixed bacterin, there has followed marked amelioration of pain, subsidence of temperature, and resumption of joint function to a considerable extent within from three to twenty-four hours after treatment was begun. As a result of this method of treatment, his patients generally speak of a feeling of well-being, and even of stimulation.

The dose of streptococci injected varies from five million to thirty million killed organisms, according to the age of the child. It is injected with a sterile Luer, all-glass syringe, the dose being repeated in twenty-four hours. A third dose may or may not be necessary, as decided by the clinical symptoms. After improvement begins, it may be desirable to continue the treatment, making the injections at gradually lengthening intervals, these being possibly of from two to four weeks, so as to maintain the immunizing power of the organism at as high a stage as possible, in order to guard against recurrences of the disease and if possible establish lasting immunity.

Miscellaneous Articles

London Meeting of the Clinical Congress of Surgeons of North America

By Our London Correspondent

WHEN Alexander the Great had subjugated to himself all the then known world, we are told that he sighed for yet more worlds to conquer. The Clinical Congress of Surgeons of North America, having exhausted the clinical resources of the United States, as exemplified in New York, Philadelphia and Chicago, cast its eyes across the ocean and decided to seek a fresh field in Great Britain. After six months of arduous and energetic preparation, the Congress met in London on Monday, July 27, and remained in session during the entire week. Nor were its sessions a case of "science by picnic," for all official entertainments were rigorously tabooed—with the mild exceptions of a golf match and a visit to the National Gallery; and after attendance on hospital clinics from 9 in the morning to 4 or 5 in the afternoon, with Spartan heroism the members devoted the evening from 8:30 to 11 to listening to a series of well-selected and not over-crowded discussions of live topics in either general or special surgery.

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The headquarters of the Congress were at the Hotel Cecil and the Hotel Savoy, which practically adjoin one another, in the Strand, and are very centrally situated for easy access to nearly all the important general and special hospitals in London. The organization of the Congress was about as good as can be conceived. Not a thing was left to chance, and almost every eventuality was duly provided for. The credit for this belongs mostly to the secretary-general, Dr. Franklin H. Martin, of Chicago, and his energetic coadjutor, Mr. A. D. Ballou. The opening or presidential meeting was held on Monday evening, but the Congress, being out for business and not for amusement, began work by attending clinics at 9 that morning. A presidential dinner preceded the opening meeting at the Hotel Cecil, which the American Ambassador graced with his presence.

At the opening meeting, an address of welcome to the members of the Congress was delivered by Sir Rickman Godlee, president of the Royal College of Surgeons of England, who in that capacity last year acted as sponsor at the christening of the newly born American College of Surgeons. This college, as the vice president of the Congress, Dr. W. L. Rodman, of Philadelphia, pointed out in his inauguration remarks, was the logical and natural outgrowth of the Clinical Congress of Surgeons of North America. The American ambassador also welcomed his compatriot surgeons to the hospitable shores of Britain. He scored by repeating a remark made to him by a well-known British surgeon, who told him that he always advised his pupils that their surgical education was not complete until they had paid a visit to the United States and observed the work of distinguished American surgeons. Mr. Page added that, now that so many of those surgeons had come over here with a corresponding object in view, he considered that "honors were easy."

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The scientific portion of the first meeting consisted of an admirable paper by Prof. A. von Eiselsberg, of Vienna, on "The Selection of the Method of Operation in the Treatment of Gastric and Duodenal Ulcers." In brief, Prof. Eiselsberg holds that perforation into the peritoneal cavity demands immediate operation, peritoneal irrigation, closure of perforation, and in bad cases jejunostomy. In hemorrhage, operation is usually best left alone. In typical pyloric stenosis, gastroenterostomy is the operation of choice. Unilateral pylorus exclusion offers the greatest security for ulcer, especially if fresh and painful, and for stopping hemorrhage. Gastroenterostomy is not so feasible for ulcer at a

distance as at the pylorus. High hydrochloric acid values of gastric juice favor postoperative peptic ulcer (a very serious complication) and detract from the value of gastroenterostomy and exclusion.

In ulcer situated at a distance from the pylorus, as well as where there is a high hydrochloric acid value, transverse resection seems the operation of choice.

In discussing this paper, Sir Watson Cheyne made a strong plea for gastrostomy combined with infolding of the ulcer, as a method of treatment in cases of gastric ulcers, especially when unsuitable for excision through their cardiac situation, fixation to important structures, or adhesion near the pyloric end. Mr. James Sherren held that there was good ground to believe that ulcers of the stomach and duodenum were associated with, and secondary to, disease in and around other viscera, particularly the appendix. The whole abdomen should be examined at operation, and in most cases the appendix removed. The treatment consisted in infolding the ulcer, if situated (as was usual) on the anterior wall, and performing posterior jejunostomy, which operation alone so modified gastric conditions that ulcers healed and excision or partial gastrectomy was necessary only when complications arose.

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Dr. J. B. Murphy, of Chicago, took for his presidential address the subject of "The Limitations and Technic of Arthroplasty and Bone Transplantation." He contended that all the arthritides are metastatic from infections elsewhere, not metabolic; that a definite period elapses between the original infection and the appearance of the arthritides; that arthritis beginning with a chill is almost certain to result in ankylosed joints, but that ankylosis may be prevented by proper prophylactic management; or if it has occurred, a sliding, normal, motion can be reinstated by the interposition of a pedicled fascia-and-fat flap, with a reconstruction of the normal conformation of the bony portion of the joint.

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Any attempt to describe the practical operative demonstrations which formed the principal object of the Congress, must necessarily be futile. As Dr. Franklin Martin declared, "Instead of listening to papers by men who can talk, we prefer to see things done by men who can do them," and he added the assertion, which I can well believe, that "If there is anything new in London, we shall be doing it shortly in the United States." It must suffice to say that several hundred operations were performed before members of the Congress by some 260 surgeons, of whom 4 were women, at 38 general and special hospitals, and that the operations covered practically every field of surgery, general and special. They had to be seen to be appreciated, and loud and frequent were the expressions of recognition of the very high average level of the surgery witnessed.

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In addition to the operative clinics, which were divided into five groups, viz., general surgery, gynecology and obstetrics, orthopedic surgery, surgery of the nose, throat and ear, and surgery of the eye, various special demonstrations were given. Professor Arthur Keith, of the Royal College of Surgeons, on Monday gave in its celebrated museum a demonstration on peritoneal adhesions, and on Thursday one on Hunterian specimens, illustrating the repair of bone. Demonstrations on radium and x-ray work were given at the Middlesex Hospital by Dr. Lazarus Barlow, at St. Thomas's by Mr. A. D. Reid, at St. George's by Dr. W. S. Fox and Dr. G. A. Simmons, at King's College by Dr. Robert Knox, at the London by Doctor Scott, at Great Ormond Street by Dr. Ironside Bruce, and at University College by Mr. Davies.

Mr. S. G. Shattock on Tuesday gave a demonstration at the Royal College of Surgeons, of specimens relating to tumor formation. Dr. Dudley Buxton at University College, delivered an address on the introduction of anesthesia into University College Hospital, and its influence on anesthetics in England. Doctor Emery, of King's College, demonstrated the latest injection of neosalvarsan. On Wednesday, Sir Rickman Godlee demonstrated the Hunterian and Listerian specimens at the Royal College of Surgeons. There was also a display of antique instruments and of Hunterian relics in the Museum of the London Hospital, by Mr. Howard. On Thursday, Dr. H. Sequeira, at the London Hospital, gave a demonstration of skin diseases. On Friday the Museum of the Royal College of Surgeons again provided material. Mr. Colyer showed Hunterian and other specimens in the odnotological section, and Mr. Arthur Cheatte demonstrated the relative importance of different types of temporal bone.

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The bolt from the blue which fell on Europe last week, when the Austrian ultimatum was issued to Servia, has resulted in a big war cloud which spreads over all Europe and envelops Great Britain also. With the

declaration of war by Austria against Servia on Sunday, the cloud deepened, and its effect was at once manifest on the Congress by the sudden departure of most of the Continental members to their own countries. To the American, who finds it difficult to understand the subtle intricacies and interlocking character of European policies, it was evidently hard to grasp that the seemingly well-deserved chastisement of a pesky little nuisance of a bad boy by his outraged and injured senior, should be in any danger of letting loose the fight of Armageddon. As the days passed by, however, and he began to *feel* the cloud about him, with no relief appearing in sight, some of him became nervous, which was not lessened by a few holding return bookings of later date on German steamers finding them cancelled, and by others booked to return a few weeks hence by the various Atlantic lines being reminded that the outbreak of war involving England would withdraw from passenger service for naval reserve duties many of the principal vessels that have hitherto gone the way of luxury and ease. At the moment of dispatching this letter (July 31) the war cloud is gradually settling down over the land nearer and nearer, like a blight.

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If the exigencies of things permit, I shall forward in time for the next issue a brief resume of the papers that were read at the evening sessions and of the discussions that took place thereon, with a few additional notes of happenings.

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Aug. 5.—Events of the gravest character have moved rapidly since I posted my last communication on July 31. During the week of the Congress, those American physicians who were acquainted with the difficulties, the dangers, and the intricacies of European national politics began to experience considerable uneasiness concerning their situation in the event of hostilities involving Great Britain breaking out, as a consequence of the developments between Austria and Servia. The Balkan danger has loomed over the horizon of the peace of Europe as an explosive center that a spark might ignite, almost as far back as I can remember. I recall that during my many years' residence in the United States, a portion of which was spent in Chicago, I wasted much valuable time in endeavoring to explain to my American friends what a very real and imminent danger it perpetually was, however innocent it might for the time being appear, and that when the dogs of war were unloosed, their onrush would assuredly come like a bolt from the blue.

During the week of the Congress, almost up to the end, I was repeatedly struck by the apparent incapacity of a large proportion of the American physicians to grasp the terrible gravity of the situation. The general answer seemed to be, "It is too impossible—it is unthinkable." On the other hand, nearly all the Continental doctors returned abruptly home in the early part of the week.

We have had in this country very many people who, with less excuse, have entertained the same idea, forgetful of the fact that for the most part international quarrels are never dominated by reason and logic, but rather are always the result of one or other of the elemental passions, thus making the parties insusceptible or more often utterly indifferent to, reason and consequence. It was not until towards the end of the Congress, that I found that some trepidation had at last been aroused in some of my friends by the fact that their return sailings on a German liner had been suddenly cancelled and that, owing to the imminence of war, the mercantile marine sailings under the British flag, between this country and the United States, were likely to be seriously interfered with.

As you know, on Saturday, August 1, the bombshell burst by the declaration of war between Germany and Russia. The upshot has been that a considerable number of American physicians and their families who attended the Congress, are for the present unavoidably detained here, but I am glad to learn that steps are now being taken by your government for their assistance and release.

The plight of those travelers on the Continent is much worse, at present at any rate, than of those in this country, who will assuredly soon find their way home. I only hope, for the sake of my country, and in gratitude for the innumerable kindnesses I received at the hands of my medical friends in America during many years, that the members of the medical profession in London have done as much as they could, as individuals, in this time of great confusion, to allay the anxiety and to lessen the strain on their visiting confreres.

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[The story of the Congress will be continued next month. Unfortunately, our correspondent's second letter, a part of which is printed herewith, reached us too late for inclusion in its entirety. We squeeze in a few paragraphs on account of our vital interest in the war. We hope that our correspondent will keep us

fully informed concerning the situation in England.—Ed.]

THE FEE-SPLITTING SURGEON

It is high time that physicians should combine to put out of business the fee-splitting surgeon. We never hear of a fee-splitting physician; they do not exist. Physicians, as a rule, are men of higher character than the surgeons and do not come under the strictures that are necessary to make men honest.

But surgeons are well known to solicit patients by paying commissions to whomsoever will turn them over to their greed for operative fees. They are denounced by the American Medical Association as the ultimate of dishonest action on the part of professional men. They secretly conspire to rob the unfortunate patient who is compelled to seek surgical service, though financially unable to bear its burdens. They assume a placid and semireligious countenance while they deliberately squeeze the dying victim of his last dollar, to divide with some weak acceptor of a portion of the fee. They are as devoid of mercy as they are free from injustice, and their souls are hardened by habitual imposition on the defenseless, until pity has no place in their hearts, no influence upon their selfish grasping. They are foes of the sick and physically unfortunate, enemies of every noble tendency of the human soul, violators of inborn natural rights, and robbers of those who stand on the brink of the grave.

How many there may be of such men we can not know; but, from the extensive agitation of fee-splitting as a bad practice, we must infer that a very large part of the surgeons of the land are guilty of this peculiarly detestable crime of this class of professional men. The rapid increase of small village hospitals, run exclusively for private gain, tends to cultivate fee-splitting as an epidemic of wide extent, and the weak character of men who gravitate into surgical channels feeds the stream of fee-splitters to a flood.

Some extraordinary means should be devised to remedy this ponderous evil. Laws have been suggested, and even tried. The state of Wisconsin now makes it a criminal offense for a surgeon to rob a man before he is dead. But laws can not be made stringent enough to catch the devil, nor complete enough to search out the clever details of all varieties of fee-splitting.

The only remedy that offers any prospect of complete success is, to take the privilege of naming the size of the fee out of the surgeon's control, and to place this process in the hands of the honest physician himself.

The family physician should safeguard the unfortunate patient and stand between him and the surgeon. He should decide just the amount that his patient properly should pay for surgical work; and from his decision there should be no appeal. In this way the great body of honest physicians of the country can crush this hydra-headed evil and thereby earn the eternal gratitude of millions yet unborn.

A. D. Hard.

Marshall, Minn.

THE BULGARIAN BACILLUS IN DIABETIC GANGRENE

Such an experience as I have had with galactenzyme ought to be published, so as to give others a chance to give the preparation a trial and see whether mine is only a coincidence or whether it would be the universal result of the therapeutic application of the Bulgarian bacillus.

A man 66 years old who had diabetes mellitus, of pancreatic origin, of several years' standing, found last fall that there developed necrosis of the metatarsal bone of one of his big toes. After the usual surgical treatment the necrotic portion of the bone exfoliated and the foot healed. This spring one after another of the bones of the second toe became necrotic and had to be removed. Gradually the process extended, until last month the metatarsal bone became involved, was denuded of its periosteum at its distal end and threatened to necrose; and in spite of local antiseptic and appropriate dietetic and constitutional treatment, the wound continued to secrete pus in abundance.

At a loss as to what to do, I began, about two weeks ago, to prescribe galactenzyme tablets, two of these to be swallowed one hour after each meal, followed by a copious draught of water. To my surprise and delight, in two days the suppuration had ceased, the bone was covered with healthy granulations, and since then has healed completely.

To be sure, whether this is a mere coincidence in this individual case or whether this result would be the rule following the use of the Bulgarian bacillus in necrosis in diabetic individuals, remains to be seen; at all events, I should much like to hear of the experience of others with this treatment. In the present case, the sugar still is present in the urine and

the man remains on a strict diet. However, his foot has healed up. If any of the "family" have any similar experience, it surely should be reported in these columns. For, if this simple expedient will obviate resort to operative measures in diabetic necroses or renders the necrotic conditions developing in these patients more prone to heal, it has added an extremely valuable agent to our therapeutic equipment.

CHARLES ROSEWATER.

Omaha, Nebr.

[About a year ago Beveridge reported (in *The New York Medical Journal*) 176 cases of diabetes treated with Bulgarian bacillus tablets. Improvement was the rule, and in many instances sugar disappeared entirely from the urine. Boston has recently advocated the use of the same organism in treating diabetics and has reported some fine results. Doctor Rosewater has good backing.—ED.]

AN INTERESTING RESULT WITH NEO-SALVARSAN

Mr. M., aged 24, came to me December 12, 1913, seeking relief for a severe leg ulcer. For the past five months it had been treated by several doctors, as a varicose ulcer, with but little benefit. The granulations were large, deep-red in color, and bled readily when touched, and were slightly elevated above the skin. The surrounding zone was swollen and edematous and of a deep-purple color. The ulcers were about five inches above the external malleolous. The patient was in a desperate condition, and had lost about 25 pounds in weight. He was constipated; had marked gastrointestinal disturbance, and was very anemic (hemoglobin, 70 percent; R. B. C., 2,700,000; whites, 11,200).

The patient was put to bed, bowels were regulated, and general tonic treatment was instituted. He denied syphilis. Has a wife and two healthy children. Because of the varicosity and the characteristic ulcers, with the negative history, I treated it as a varicose ulcer; but the results were far from gratifying. I decided to try the therapeutic test, giving biniodide of mercury, 1-12 grain t. i. d., with 30 grains of potassium iodide, t. i. d. This was kept up for three weeks; but at the end of this time the leg was in worse condition than when first seen.

I was very much interested in the case and had a Wassermann test made. This proved strongly positive. Convinced that I had given the sheet-anchor, mercury and iodides, a fair trial without any benefit, I gave, on January 15, 1914, 0.6 Gram of neosalvarsan intravenously, and in three days the swelling and purple color had disappeared, the ulcers were rapidly healing. One week after the first injection, a second dose, 0.9 Gram, was given intravenously, and what the first failed to do the second dose accomplished. Today the patient is most grateful, having completely recovered and gained 13 pounds in weight.

LANNING E. LIKES.

Lamar, Colo.

[Nevertheless, Doctor, I would put that man on mercury and keep him on it for a year or more.—ED.]

NERVOUSNESS AND NEURASTHENIA: CAUSE, SYMPTOMS AND TREATMENT

The comparison has been made, as to finance, that a millionaire may draw heavily upon his funds, yet keep a large surplus; but a man with only a hundred dollars in the bank can easily exhaust his account and it may be months or years before he will financially recuperate. And so there are millionaires of nerve-force, those who are never fatigued or feel weak, as if they could not expend all their energy, no matter, it seems, how much work they do or how many different forms of excesses they practice. On the other hand—and their numbers are daily increasing—are those who, without doing anything in particular, are unable to be physically or mentally active, and, without being absolutely sick and never perhaps in a lifetime confined to a bed a day with an acute disorder, yet, are so poverty-stricken in nerve-force that they almost continuously feel tired, worn out, and are complaining of this, that or the other disorder. The least toil, sorrow, injury, or anything out of the usual routine, even a sleepless night, may sweep away their narrow margin, leaving them in a state of nervous bankruptcy, from which they find it as difficult to rise as from financial bankruptcy, and they lead a life, if not of invalidism, at least of semi-invalidism.

Some of these symptoms of functional debility and irritability are the following: headaches; pain in the brain at back of neck; heavy feeling or pressure in the head; dizziness; noises in the ears; insomnia; tenderness of the spine; nightmares; loss of appetite; dyspepsia; nausea; costiveness; indecision; fretting over trifles; hopelessness; fear of responsibility or of being alone; fear of

contamination; convulsive movements, especially when going to sleep; feeling "all in" and exhausted, without any actual pain; cold feet and hands; chills and flashes of heat; sensitiveness to changes in weather; hypochondria; inability to sew or read for any length of time; palpitation of the heart; deficient mental control. And even this long list by no means is complete; and, in fact, an absolutely exhaustive catalog of the symptoms of the nervously deficient can not be compiled, since each case differs somewhat from every other one presenting itself.

The chief, and primary, cause of this condition has been held to be modern civilization. The secondary and tertiary causes are the extremes of climate, personal habits, mental activity, and so on; but the secondary causes are considered without power to induce it, except when being interwoven with the modern forms of civilization, its noises, stress and strain, education, and the struggle for existence and pursuit of wealth, and so on. (Dr. Geo. M. Beard, on "Nervousness and Neurasthenia: Its Causes and Consequences.")

However, if, as asserted, modern civilization, with its stress, were really the chief cause, and the others enumerated the contributing factors, it would be evident that all thus exposed would have to suffer, and those who live in the midst of this noisy, nerve-racking civilization and who work the hardest should be the first to fall by the wayside, nervously exhausted. Yet, some of these folk never know what it is to be fatigued. On the other hand, we have those who never do nor ever did much of anything and, yet, always feel tired out; and no medication, electric treatment, massage, change of climate, springs or dieting will work any benefit, except perhaps a passing amelioration. Truly, it is a wonder that there are not more nervous breakdowns from this strenuous life of civilization, for so many people with a small margin of nerve-energy are trying to keep up with the procession.

We know that the fundamental essence of life is nerve-force, and, no matter what the disease may be, the most prominent, fundamental, and most constant symptom is debility; and no complete or perfect recovery can be expected until the vital force has been increased. Therefore it follows that a lack of nerve-force, with its resultant debility, causes lessened power of resistance to disease. The natural vital forces being enfeebled and the system's reserve overdrawn, causes functional disturbances, and, if continued, must result in organic disease. A lesion always is a result, and, therefore, cannot be a cause.

Nature, with its innate power, with its tendency to preserve life, often accomplishes marvels in overcoming diseases and restoring health. But, nature itself must be helped, logically, rationally, and scientifically.

In the nervous and the neurasthenic, there certainly is a waste of nerve-force—a leak thereof, as it were. Now, where is the fault, the causation of this state of affairs? And where the remedy, and how applied?

In conceding all the causes enumerated as factors in the development of a nervous constitution, it must be stated that the main factor seems to have remained long undiscovered, and not understood even at the present day by a vast majority of medical practitioners.

The eye has long been suspected of being a principal factor, and rightly so. It has happened that by the adjustment of lenses much benefit has been wrought, which resulted in a particular branch of activity, that of the optometrist. The latter, however, through imperfect knowledge and lack of investigation in optometry and ophthalmology, is concerned solely with the fitting of glasses for the correction of subnormal vision (manifest errors of refraction). This procedure improves the vision and sometimes proves of additional benefit to the patient by reason of reduced eye-strain; but the optometrist almost invariably makes the mistake, when vision proves normal by standard test types, of fitting concave glasses, which, in fact, render vision still more acute and clear. However, eye- and nerve-strain are increased and reflexes are still more aggravated. I am not speaking of the almost universal overcorrection of myopia and the fitting of minus lenses to apparent myopics. The writer often removed glasses from patients wearing from –.50 to as high as –2.00 dioptres, who apparently needed such to maintain normal vision and, after some months' treatment, they maintained normal vision without them and with marked benefit as to the condition of the nervous system. And, further, they do not seem to have any ideas as to prism values, except erroneous ones.

It is not the manifest error of refraction that produces this nerve waste and debility. I will quote from Dr. Chalmers Prentice's book, "The Eye in Its Relation to Health:"

"There seems to be little, if anything, left to discover concerning the laws of refraction in their application to defective vision.

Helmholtz, Donders, Landolt, and many others seem to have solved nearly every problem in matters of refraction and the application of glasses for the correction of the same. Many ingenious methods have found their way into use for determining, both by objective and by subjective examinations, the artificial aids to produce the most perfect vision. The acquisitions in this field are the result of many years of careful investigation, through all of which the tacit assumption has been that, when the eye was so corrected and the function of vision at once more easily and perfectly performed, all that could be desired had been accomplished. Here is exactly where the greatest error has existed, and it has lain so deeply hidden that it is not entirely strange that it has remained so long undiscovered. What misled us to the greatest extent was, that, when the function of vision was perfectly performed, we rested in the belief that the eye was perfect; but it did not occur to us that some eyes might be using an excessive amount of nerve-impulse to bring about and sustain that perfect vision."

As stated, not the manifest error, which may be corrected with lenses, but the *eye- and nerve-strain of the latent defects* cause nervous derangement. There is a field large enough for the practitioner who equips himself with a thorough knowledge of the eye in its relation to the nervous system, in combination with his applied knowledge of dietetics and hygienics, to apply himself in the treatment of nervous disorders due to *latent* eye defects. These defects often prove of a high degree, including rectimuscular imbalances, although vision may have continued normal.

Every local disturbance has some cause back of it, and I have spoken of the origin and the prophylactic and the principal curative, or, rather, initial or first step, measures; and in cases of functional disorders without lesion of the only satisfactory treatment. For other advanced information, I direct attention to the article by Dr. T. G. Atkinson on "Therapeutics of Neurology," published in The American Journal of Clinical Medicine for February, 1912.

I make no claim to originality as to treatment through the visual centers, but I have verified the conclusions and experience of others by many years of experience of my own.

Adolf Tschumi.

San Francisco, Calif.

[All defectives, of course, are the victims of a vicious circle—or, more correctly, of a vicious circuit. Which end of the circuit appears to us the positive, and which the negative pole, depends upon the angle from which we are viewing the subject. If we view it as scientists, concerned with the underlying origins and causes of things, we are impressed by the importance of the biologic end. From such a standpoint the defective—the neurasthenic, for instance—is born, not made. He is, in fact, himself, as a whole, a *result*, and nothing within himself can be the cause of his condition. All the detailed defects and handicaps, anatomical and functional, under which he struggles are part and parcel of the net defectiveness, which is the expression of some hereditary or developmental perversion. Viewed from this angle, the neurasthenic is more or less of a hopelessly doomed individual; and neurasthenia, with its protean manifestations, an equally unreachable condition in the individual. To correct this and that single defect is mere tinkering. The only effective remedy is the biologic, racial remedy—through the germ-plasm—to breed it out.

When, however, we cross to the other side of the stage and assume the role of clinicians, the viewpoint changes. Here we are not concerned with the race, but with the individual—the patient—and it becomes our business to save the man, as far as we can, from the disabilities with which his biology has handicapped him. From this angle, therefore, the things which to the biologist were results assume the importance of causes. His digestion, his eyesight, his sensori-motor mechanism, in short, every phase of his functional grapple with life, must be made as nearly equivalent to normal as our therapeutic resources will enable us to do. We cannot cure his defectiveness; but we must put him as nearly as possible on an equal footing, to meet the demands of life, with the man who is not defective.

In errors of refraction we have a capital exemplification of this dual angle of view. All errors of refraction are unquestionably manifestations of biologic defectiveness. As a general proposition that may be taken as axiomatic as a clinical consideration, it is equally valid, although not always quite so clear-cut. In general, hyperopia and myopia, respectively, mark the point where the individual has under- or over-stepped the line of evolutional advance. Refractional error may be the only stigma of defectiveness. It rarely is, to the keen eye of the biologist; but, for all practical purposes, it frequently is. But it is also very often a part of a general state of

biologic defectiveness of neurasthenia, for example.

From the biologic viewpoint, therefore, errors of refraction are not the cause of neurasthenia, but a result; and they are utterly incurable, in the individual. It is impossible to make a hyperope or a myope into a norm. But from the clinical standpoint, they are an important item in the vicious circuit, and act as causes. They impair the man's fitness for his struggle for life and aggravate his troubles. Hence they call loudly for clinical help; and, fortunately, they exemplify, perhaps better than anything else, our ability to make up to the defective for his disabilities, for there is no form of functional defect that we are able to compensate so adequately and satisfactorily. This, by the way, is one of the reasons why I cannot understand the astonishing indifference of the average medical man to the work of refraction.—ED.]

VACCINATION TREATMENT FOR DEVELOPED SMALLPOX

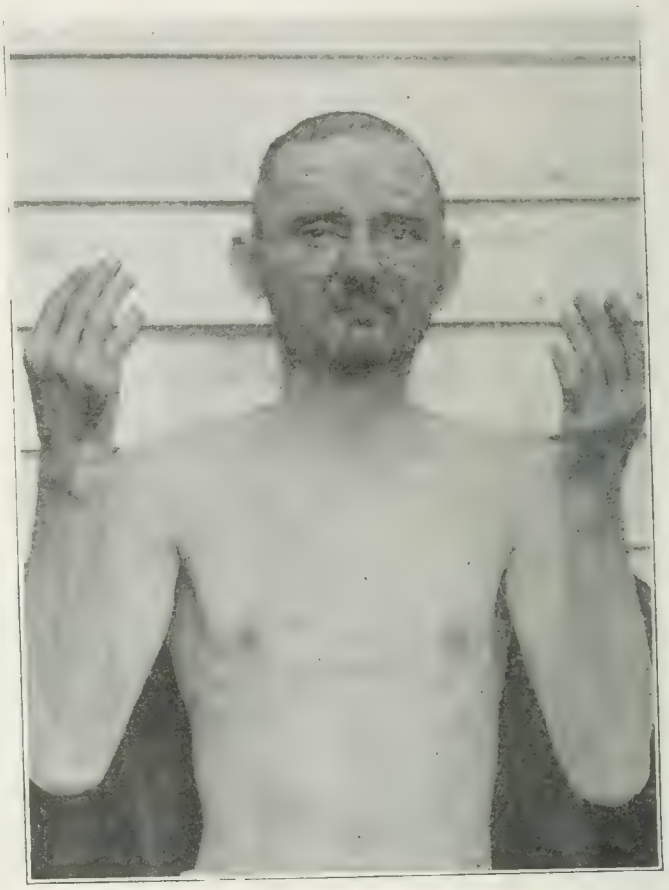
Please allow me space for a few remarks on the subject of smallpox, I wish to go on record as advocating vaccination as one of the means *for the treatment of smallpox, after it has developed.*

We all know that vaccination is the only means we have to prevent smallpox, and, to my knowledge, no other has ever been used. I advocate the use of the vaccine virus as one of the most active therapeutic measures for the treatment of developed smallpox. We regulars can claim it as antidotal, the Homeopathists can more correctly exclaim, "Similia similibus curantur."

I have treated four cases by vaccinating after the regular stage of incubation and after several pustules had formed on the body. Three were adults, and, they were vaccinated after a few pustules had formed; the other was a child, five years old, with scattering pustules over the hands and wrists, and a few on the body, with about fifty well-developed pustules on the face, as near as I could count them.

In the cases of the adults, none or only a few pustules developed, after vaccination. In the case of the child,on the first and second day following vaccination, the pustules on the face did not seem to increase, but several were developed on the hands and wrists. On the fifth day after vaccination the pustules had cleared off wonderfully, disappearing rapidly from the face and melting off the body generally without any marked desquamation. In these cases, the site of vaccination did not show a characteristic take, i. e., going through all of the successive stages to the final formation of a scab, though a vaccine sore was produced, showing that the virus had been received into the system, and had affected it; and also that the virus of the smallpox had antagonized that of the vaccine virus—each tending to neutralize the other.

It is logical to suppose that, even without a sore forming at the site of vaccination, the virus being received and absorbed would favorably affect the system as a treatment. When a sore is formed, i. e., a partial take, I think, is positive evidence of the beneficial



Front view, case of smallpox

effect. Of course, a prolonged trial would be necessary to establish these findings as facts. The same general medical treatment was pushed in all of my cases, but I noticed a marked difference for the better in the patients vaccinated as above mentioned.

It is an established fact that vaccination immediately after exposure will prevent the development of the disease, the stage of incubation of the vaccine virus being shorter than that of smallpox. I am not aware of the extreme limit of time after the inception of smallpox in which vaccination will act as a preventive. I have vaccinated families after their members had been in the house for six days exposed to well developed and severe

smallpox, and this vaccination prevented the disease.

I have vaccinated people who had been vaccinated years before; a great many would take, while others failed. Some cases failed at one time, but in six months or a year afterward another trial would result in a nice take.

I send you a photograph of a very severe case of the confluent variety. This man had refused to be vaccinated to prevent having smallpox—said that he preferred smallpox. He did prefer it, till the disease was contracted—then, and then only. In this case, vaccination was not used as a treatment as in the other cases mentioned.

Rear view, case of smallpox

This brings up another question, that of compulsory vaccination. I think that our state (North Carolina) should at least insist upon the vaccination of all school-children upon their first entrance in school, and that it be repeated twice within the following ten years. And, to be just and logical, the teachers also should be vaccinated in the same way.

It is criminal to allow the little ones to be marked and pitted for life—not to mention the many dangerous and serious conditions following this loathsome disease.

It was a wise step on the part of the state board of health to remove the quarantine on smallpox. One of the many good reasons for this course was that quarantine, beside being illogical and unscientific (it being a preventable disease), was that it is a useless expense and that it offers a false security. The people expected the paternal arms of the State to protect them, and, relying upon this, the importance and necessity of vaccination was forgotten or neglected.

Just here I wish to make a plea, on account of the above-stated reasons, for the discontinuance of the unnecessary, foolish, and ridiculous practice of placarding houses where there is smallpox; unnecessary, because it does not prevent the spread of the disease. If there is smallpox, the people know it, and the matter should be left in their hands, now that the health-officer has no control; foolish, because it appears as if the health-officer were doing something, when, in fact, nothing is being accomplished; ridiculous, because the patient is allowed full liberty to mix with everybody, as suits his own sweet will; which he does at the most dangerous time, that of desquamation. So, placing the placard is a useless trouble and expense, while the health-officer is twitted by the patient: "What's the use of that, doctor, when I can go all over town if I wish to?"

The placing of a placard at all times involves the health officer in an argument, and causes discontent on the part of the family; so, while useless in itself, gives rise to friction and hard feelings. The practice lessens the influence of the health-officer and disturbs the friendly cooperation that should exist between him and the people.

C. W. HUNT

Brevard, N. C.

HUMANITY, AND TOBACCO

Humanity needs to be taught more on the direful effects of tobacco. At present we have 800,000,000 people using tobacco; which means that 800,000,000 people are subjected to the worst form of slavery, and most surely are doing the suicidal act.

Statistics show a wonderful increase of consumption and cancer since the advent of tobacco. It is high time that humanity in general be awakened to the fact that, at our present rate of going, in a few generations the earth will be depopulated once more.

The United States consumes $1,000,000,000 worth of the poison per annum. With the millions for tobacco each year, we spend a greater number of millions for alcohol in various forms, to patch up and straighten the road to destruction.

We have a hundred diseases that are caused by tobacco. And, yet, we go blindly on to the insane asylum, the murderer's cell, and the drunkard's grave. We are so degenerate that half of our offspring die before they reach the first year of age. Pitiable human failures!

In the days of highest physical perfection of Greece, Rome, and Sparta, our worst popular poisons were not known.

We have had alcoholics for 2400 years, but we knew nothing of tobacco prior to 350 years ago, and but little of it till about 250 years in the past. But for more than four-score years it has not been recognized as a positive human destroyer. Prior to the days of poison taking, we did not have paralysis, apoplexy, heart failure, and scores more of kindred evidence of poisoned nature. General paresis (destruction of vitality) has been more prevalent in the last sixty years than in all the centuries of human history.

Every one should be taught that nature's laws are God's laws, and God's laws are nature's laws, and that they are absolutely inviolate. Every violation has its penalty. A moneyed prince, or penance of any kind, cannot pay the bill. Nature's laws will never be revoked by the freaks of man.

E. NEFF.

Kimball, Neb.

[Since the writer of this comment is not a tobacco user, his opinions can not be charged with being colored by personal prejudice. The tobacco habit is not a "nice" habit; but it is not quite just to charge the "weed" with all the crimes and misdemeanors which Doctor Neff lays at its door. The fact is, that such investigations as have been made do not show tobacco to be such a terrible body poison. Used in excess it does harm, but so do many other good things—food and exercise among them. We had apoplexy, heart disease, consumption, cancer, neurasthenia and paralysis long before tobacco was brought across the ocean to Queen Bess's court. While these diseases are increasing there are many factors working in that direction—among them alcoholization, syphilization and civilization, meaning by the latter all the stresses of modern high-tension business life. General paresis is now known (thanks to Noguchi's studies) to be *always* the result of syphilis, and this disease is responsible for many ailments the causes of which are obscure to us.

Give us temperance in all things, even in our reforms! Personally I believe I am better without tobacco, and I think the same is true of most other people. Also, I believe that I am too fond of sweets. Yet I know people that seem to me to be really helped by an after-dinner cigar, just as I know people who eat too little sugar.

Doctor Neff need feel no anxiety regarding the depopulation of the earth by tobacco. A study of the history of America, of the great West, of Nebraska itself, for the last fifty tobacco-polluted years should set his anxieties at rest.—ED.]

MEDICAL PARTNERSHIP

Why don't physicians "double up" in the practice of medicine, the same as lawyers do? There's no use for physicians to be so selfish. Some are doing enough business for three men to do, by overworking—both night and day—thus curtailing the years of their usefulness. Why not join hands and mind with a brother physician and thus be able to do more and do it easier than one can do single-handed. Besides that, there is a certain amount of protection and special benefits are to be derived therefrom.

Some reasons:

1. Some offices have patients waiting for hours before being treated.
2. Some patients do not receive the time nor attention they should, and all because they patronize an overworked physician.
3. Partnerships would eliminate consultations (something undesirable), many times.
4. Physicians could step out of their office occasionally or take a needed vacation without forfeiting their patients to a waiting competitor.
5. The writer is not a socialist, but he believes in cooperation.
6. There is joy, pleasure, and profit in a medical partnership where the practice justifies it.
7. There would be more partnerships formed if it were not for selfishness among physicians and surgeons.

Who should take a partner?

1. Any doctor who has so many side lines that he neglects his practice.
2. Any young doctor doing more than he ought to be doing for the good of himself and family.
3. Any physician of any age whose health prevents him from doing all he might do.
4. Any physician of any age whose finances are such that he would like to get a little enjoyment out of life (aside from practice)

and who would be willing to share a dollar with a brother physician.

There are many other reasons why medical partnerships should be formed and coopera tion exist among physicians and surgeons.

Let's hear from others on this subject.

"KIRK."

CEREBRAL ABSCESS

Here is the history of a rather unusual case which you may consider of enough interest to publish for the benefit of your readers.

In a woman of twenty-eight, married seven months, four months pregnant, an abscess formed at the root of the first bicuspid tooth of the upper maxilla. This abscess was treated three weeks after the first symptoms of pain in face and head showed, and was drained thoroughly. The tooth was then extracted and found not diseased. The pain was relieved for a few days, but returned, together with swelling of the face above the site of the former abscess. The second abscess, which pointed at the angle of the left eye, was opened and drained.

Then followed a period of two weeks when paroxysmal attacks of pain were complained of, and the patient came in to consult me. A slight swelling was seen to extend from the root of the nose upward on the forehead. Two septal abscesses were opened and freely drained. The pain ceased. The swelling externally was opened and the pus liberated; and it healed quickly. There was no vomiting, only a slight rise of temperature, pulse about 84, bowels were regular, appetite poor, no meningeal symptoms.

Two days later, being in the neighborhood, I called upon the patient. She was very sleepy, could be roused easily, but could not or would not lift a hand, her head, nor turn in bed; but uttered no word. She did not refuse nourishment, had no involuntary passages of urine or feces; simply slept quietly when undisturbed. I called the next day, and found the patient in the same condition, with pulse at 80, temperature at 99° F., pupillary reflex normal. I diagnosed cerebral abscess and advised immediate operation. The patient was brought into town the next day. The third day of the somnolent condition, and on the way to the Pocatello Hospital, a general Jacksonian seizure occurred, followed by facial convulsions at hourly intervals.

At the hospital, it was found that the right arm and leg were paralyzed. The convulsions were now coming every five minutes. The eyes were examined by an oculist. There was no pupillary reflex, pupils were not dilated, no optic neuritis; but the first stage of "choked disk," a very slight haziness of the disk, was seen.

Operation was performed at 5 p. m. The skull was opened over the left temple and pus evacuated from under the dura water. A septic condition of the left cerebral hemisphere made the prognosis serious. The convulsions ceased for six hours; pulse and temperature were normal. Then rising temperature and rapid pulse set in, and the patient died at midnight of the day after operation. Miscarriage took place four hours after the operation. The child lived six hours.

R. J. SMITH.

Bancroft, Ida.

[The moral of this case is, that any septic condition occurring upon the head or in its cavities should be watched with tireless vigilance. Pus accumulations in this locality should be evacuated promptly.—ED.]

MERCURIC-CHLORIDE POISONING: DOES SODIUM CHLORIDE HELP OR HARM?

In Doctor Carter's article on "Mercuric-Chloride Poisoning" printed in the April CLINIC, I see that in some cases he used two pints of normal salt solution subcutaneously, deep into the tissues below the breast.

After doing this very same thing in a similar case about a year and a half ago, which terminated fatally twelve days after the patient's taking 15 grains of mercuric-chloride intentionally, I have wondered whether it was good treatment or quite the opposite.

I have noticed in medical journals that some physicians think that these injections sometimes produce an irritation of the kidneys. If this is true, why wouldn't they be strongly contraindicated in bichloride poisoning, where this is always a pronounced condition?

I have successfully treated three cases of bichloride poisoning by means of gastric lavage, emetics, eggs, milk, and flour. I think the other woman (above referred to) could have been saved if treatment could have begun earlier; but she kept the fact secret for about four hours.

C. O. RICE.

Watertown, N. Y.

[We do not think that anyone any longer regards injections of normal salt solution as

injurious to the kidneys. There was some question on the point for a time, but we believe it is now pretty generally agreed that normal salt solution is highly beneficial to kidneys when they are threatened with inflammation, because of its diluent effect upon the toxins which are the cause of the inflammation. So we give it in such conditions as scarlatina, nephritis, etc. Of course, these conditions are hardly present in bichloride poisoning; but we do not think, even then, that normal salt solution would do any harm. As to whether it does any positive good—that is another question.—Ed.].

CURRENT COMMENT BY A COUNTRY DOCTOR

Out in the country we meet with the same problems which confront our urban brethren. The city man has readier access to more books, if he has time to read them, and consultation also is easier to secure. However, we of the country can attend the County Society, take the journals, and, when we are right up against it, consult with ourselves. These notes, whether scientific or otherwise, are just thoughts and observations of a country doctor.

Bichloride of Mercury.—It is with pleasure that we read of Doctor Carter's treatment of corrosive-sublimate poisoning. The reasoning is based on such simple and correct principles of chemistry that it is a wonder we did not think of it ourselves. It is always thus when the other man reasons out and applies a thing. However, it is to be hoped that before long the use of mercuric chloride will have sunk so nearly into oblivion that antidotes for it will be seldom needed.

For years we have been accepting the application of synthesis of coal-tar products to the discovery of some new agent for relieving pain "without depressing the heart," with a resulting legion of such agents; agents, perhaps, sometimes used when the "indicated remedy" would have been better.

The writer fears that this has probably been the case in *isolated instances.* Now more attention is being turned to the phenol and cresylic acid group—the three isomeric cresols especially—with the result of better and less toxic antiseptics. In fact, a dilution of phenol is even now used as an index to bactericidal power of a large number of comparatively or fully harmless substances. No longer is it deemed necessary to make a routine procedure of killing off the blood stream's reparative and protective army by cell-coagulating media. True it is that some of these agents are patented, in name at least, but their formulæ are published. The patent system of rewarding research in the arts and sciences will not here be discussed, as it is one of the complex problems of society as now organized.

Advertising.—In the July number of The American Journal of Clinical Medicine, the editor, in mentioning the subject of advertising by doctors, says, "Don't do it." With his kind permission, I will make it a bit more emphatic. You can not afford to do it. No man nor any sophistry can justify it. The intellectual isolation resulting from such a stand is soul-stultification, if one is looking for anything but money. If money is all one wants, the prospects are that he will be disappointed. Men have made money this way, but more have lost it. This is said with the full knowledge that good men have advertised, and do so now, and that some men who profess ethics are not ethical; in fact, some are crooked. But if a competitor goes and cuts prices and even lies about you, that is no reason why you should put yourself in a position to defy the consensus of the opinion of the medical profession.

A spirit of ethics has to a certain extent ruled ever since the Hippocratic oath was taken, it being but an expression of a then age-old sentiment. My statements are made with full knowledge of the history of our art, with knowledge of sectarian squabbles, ay! in some instances of persecution, and not without study of the subject in all aspects. The only advertising that will, in the long run, pay is, to show yourself a good citizen, a positive citizen, an up to date citizen, a fearless citizen, and, within reasonable bounds, a conspicuous citizen. By conspicuous, is not meant being the recipient of a fake call from church, but being one prominent in his community by his learning, one justified in being taken by a member of the only justifiable aristocracy—the aristocracy of educated brains.

This is not written so much for the possible benefit of some man whose hair matches mine in color, but for the younger men who, ten to one, are rather hard against the proposition of establishment for their life-work. These young men will come in contact with everything, even including the "faint praise that damns." "Willie is a mighty smart boy, all he needs is experience; there is the making of a fine doctor in him." All those things are hard, very hard, but the remedy is not in going into an advertising office.

Emetine.—Long have we known the value of ipecac in dysentery, even giving it salol-coated, to enable it to reach the intestine; but, when emetine was first accepted by the leaders of medical thought and practice as "almost specific" in amebic dysentery, we feared the big dose a little. Fear has gone now. I give the hydrochloride hypodermically up to 1 grain to adults. To infants, we give the remedy per rectum, dose based upon the adult dose. Wash the bowel out, then give it combined with hydrastis, glycerin, and water, high up. Limit the use of opiates to absolutely necessary control of pain and peristalsis, until the remedy does the work.

Recently I have combined the use of emetine hydrochloride with adrenalin, to control capillary hemorrhage in minor surgery. It appears to prolong the effect of adrenalin, and seems entitled to further investigation. No originality is claimed; but the success from its use in hemorrhage of various kinds seems to justify its use in this manner.

Speaking of emetine. Soon our troubles will be added to be hematuria developing in the estivoautumnal type of malaria. Erigeron and other remedies have been helpful, but emetine seems worthy of consideration.

The "yaller chills" are not so bad in themselves, that is, the chill part. Let the patient inhale amyl nitrite or give him the *nitrite* radical in the form of glonoin, follow it up with a shot of pilocarpine, to hasten diaphoresis, unless for some cause contraindicated, then get the bowels open; calomel, podophyllin, and bilein being oftenest indicated. When secretions are established, and not before, go to quinine, remembering that the sulphate does not exhaust its possibilities. There are still the hydrobromide, valerate, ferrocyanide, and other preparations for internal use, as well as those for hypodermic administration. The action of any alkaloid differs materially according to the radical with which combined. Even if no Peruvian-bark derivative is tolerated, we still have other antimalarials, among them being salicin and arsenic, agents which should not be overlooked. The fever as such requires little attention. What is fever, and *why?* Why no fever in syphilis except through incidental complication? Why present in the period of invasion of our now acute diseases? What is the bearing of evolution and struggle for survival on this?

White's "Natural History."—Ever read White's "Natural History of Selborne"? it is a little English work, not pretentious, but accurate, and shows what one little parish had for a student whose diversion was nature. No country doctor need yearn for electric lights and pavements if he will try to read nature's pages as they unfold. Just read the serial story from the first frog-note to the close of the year. If not interested in the resident birds and the great stream of migrants going to or returning from the winter vacation, which you can not afford, then watch the green things in the hedges and beside the road, and it will not be a long and weary way.

Can you place them botanically and do you know from which medicines are derived? There is that pretty bunch of willows alongside the creek where your horse takes water; perhaps it brings to your mind that salicin is the indicated remedy in a case.

At the edge of the creek is a clump of smartweed. Ever have a case of uterine colic way out in the sticks, with nothing at hand suitable for its relief, and go find some polygonum hydropiper in a damp fence corner and, after bruising it with the flat of an ax, apply it in the form of hot compresses? If you did, you were following the pioneers of *American* medicine and doubtless did the work, although you wished for viburnum prunifolium in a modernized form. Anyway, you were thankful that your knowledge of botany saved you from giving a secretion-checking dose of morphine.

Perhaps you had the peculiar experience of having a loving and grateful parent remark: "Twelve dollars to get a man to come out here in the 'Bend' and pull weeds in a fence corner! Well! the gal done got easy, anyway." If you did, you may have had to recall a passage or two from Emerson's essays, in order to smooth your professional dignity; but, as you got your bearings by the sword and belt of Orion for the long and lonely home trail, you knew that you had practiced scientific medicine, even though you resolved next time to have saddlebags and pockets stocked with a few more readily portable active principles or concentrates.

Errors of Refraction.—If the country doctor has no trial-case, with proper knowledge of its use, he can at least have a test card in the office, and with it and a plus 0.50 lens he can detect many an error of refraction and then send his patient to someone properly equipped to correct them. Many a case of headache results from astigmatism, headaches which may have been treated as from other causes, and sometimes just "doped." Often the patient has purchased glasses at "the store," with the result to be expected.

Pituitary Extract.—Pituitary extract will stimulate involuntary muscular action when nothing else will. The stomach and colon can be handled, but the long way from the pyloric opening to the ileocecal valve often is a problem much aid to which will be gotten from a shot of the pituitary. The important field of this substance in obstetrics is not to be overlooked. However, the physician who has made a routine resort to caulophyllum, and more recently to caulophylloid, will not so often need to resort to pituitrin. While we read in the lay press, with more or less of a smile, some of the articles upon painless childbirth, we must remember that the proposition is plainly up to us. Race error of ages, usually reinforced by individual error, has caused confinement to be a horror of pain and agony to woman.

This is no reason why we should forget that the flowers and the lower animals even do not reproduce in travail and call the pain physiological. Resort to "twilight sleep," if you will; use H-M-C and a whiff of chloroform; in fact, resort to any recognized procedure, and improve on it or find a better—but, do not let those women suffer. If you do, Doctor Some-one-else will soon be the neighborhood obstetrician.

I am not here either describing or advocating his routine; all he wishes to say is that, although one possess a trained forefinger backed by all the knowledge in Lusk, Playfair, and Hirst, it is up to him to study the therapeutic aspect of parturition exhaustively. There are many men, some gray in practice, who will tell you that there should be no protracted pain in labor under any ordinary circumstances and that statement to the contrary is mere ancient didactic rot. Let us resort to the better way, and turn the very little necessary travail to joy as soon as may be, always provided that the circumstances of the mother are such that joy is possible; if not, she has trouble enough on hand without prolongation of her agony.

A. L. Nourse.

Sawyerville, Ala.

[I am sure that every reader of Clinical Medicine will join with me in thanking Doctor Nourse for this fine article, which is filled with real helpfulness and overflows with optimism of the kind we need. I agree with everything he says. There are, however, a few points which I wish to emphasize.

For instance, I am glad that Doctor Nourse spoke of emetine. New uses for this alkaloid are developing with astounding rapidity. Not only will it cure dysentery and check hemorrhage (the suggestion to use it in association with adrenalin seems worthy of being followed up), but Barrett, of Philadelphia, has found that when a 1-2-percent solution is injected into the pockets around the teeth in pyorrhea, it will relieve the condition promptly. See the abstract on page 805.

Doctor Nourse emphasizes a point that we have often made—that the treatment of malaria does not begin and end with the administration of quinine; nor is quinine sulphate the only salt of this alkaloid worth using. To open the bowels and keep them sterilized with the sulphocarbolates are very important factors in treatment. Then, try "small doses frequently repeated" of quinine ferrocyanide in some of your cases.

Every doctor ought to love nature, and there is no better book to stimulate such a love than White's "Natural History of Selborne." It is a favorite of mine. It isn't what this old worthy taught so much as his method that is most worth while. Get a copy for your leisure hours.

The suggestions regarding the management of labor are especially timely, in view of the furore in the lay magazines over the "twilight sleep." I am glad the doctor praises caulophylloid. This is, indeed, a useful remedy which is not used half enough. It is not so much a stimulant as a relaxant, aiding the dilatation of the os and thereby shortening decidedly the first stage of labor and adding to the woman's comfort. It is not a vigorous stimulant of uterine contraction, like pituitrin, which has a field of its own, with definite indications. The skilful obstetrician will use both these remedies. With all that has been said about the blessings of the "twilight sleep," as practiced in Germany, we Americans know that nothing has brought so much relief to womankind as the combination of hyoscine, morphine, and cactoid.

Give us more "comments" like these, doctor. We need this kind of talk.—Ed.]

THE AMERICAN POSTURE LEAGUE

An association recently organized, and one which certainly has a most valuable mission, is the American Posture League. This organization, which owes its inception to its president, Miss Jessie H. Bancroft, assistant director of physical training in the public schools of New York City, is concerned with the sitting and standing position of children in schools and of adults in shops, offices, and elsewhere. It hopes also to effect a more

general adoption of scientific and healthful principles in seating accommodations for working-purposes and for public audience-rooms and vehicles.

This work is to be educational, technical, and legislative. Bulletins are to be issued and lantern-slides made for lecture courses. It hopes to raise at once, $5000 by membership fees. Life memberships cost $500 or more; one becomes a patron upon payment of $250, an annual donor for $100 annually, an annual member for $50 annually, a contributing member for $25, an associate for $10 and an active member for $1 annually. Those interested should address the acting treasurer, Cornelius S. Loder, 30 Church Street, New York City.

MANAGEMENT OF LABOR CASES BY A NEW METHOD

Of late we have been reading of the Freiburg (Germany) method of inducing painless childbirth, or the "twilight sleep," as it is called by those who have gone to Freiburg to have their babies delivered.

To readers of CLINICAL MEDICINE, this "new" method is not so very new, I do believe, because I, with so many others, have in our quiet way practiced it for some years by the use of the hyoscine, morphine, and cactoid compound. Of late, since the introduction of pituitrin, I have found (and doubtless others have also) that by combining the two drugs, or preparations, not only can we secure painless childbirth—or "twilight sleep"—but also a very much shorter period for the parturient patient.

When we are called to a case of labor and find the soon-to-be mother in fear and agony of pain, we do not wonder that women will travel from India, Russia, China, America, England, and, yea, far isles of the sea to this Frauenklinik at Freiburg to be delivered painlessly of their babies; nor can women be blamed for not wanting to go through this terrible ordeal of bearing babies, when we consider the horrors of death almost through which they are called to pass for man's sake. And it is not to be wondered at when we see young women and old running hither and thither to find a doctor who will rid them of this terrible ordeal as soon as they have passed one or two menstrual periods or its not having come at the expected time. They fear pregnancy; they will go through fire and water to prevent it. And who among us have not known women offer fabulous prices to produce abortions for them? As a matter of fact, one woman offered me half of her farm if I would help get her out of trouble, lest she should have another baby.

I say we cannot, in a way, blame women for this thing, unless we find a way whereby they can have their babies painlessly, just as the doctors of the university at Freiburg have done. Regardless of scripture, "In sorrow thou shalt bring forth children," the woman of today—not the lower type, but the society woman, if you please, or she who cannot or will not bear pain—has determined not to bear children, unless there is a way for her to do so without pain.

Now, while Doctors Kroenig and Gauss of Germany have become specialists in this art by the use of scopolamine, many of us have been using a similar treatment, namely, hyoscine, morphine, and cactoid. Still, while I have found that this H-M-C combination worked wonders in relieving this distress, I have felt at times the need of something else and therefore determined on a new line of treatment. And this is what I do:

Take, for instance, a case where we find our patient with beginning labor-pains and the os about the size of a 25-cent piece, and the vulva rigid. I give the woman a hypodermic injection of hyoscine, morphine, and cactoid; then, after an hour, I ask her if she remembers her pain or whether the hypodermic I gave her hurt her. If she has forgotten it, then I am quite sure she is out of her agony, although still having her contraction.

At this critical period, if the child's head has come well down but the contractions are not sufficient to expel the child, I give her a hypodermic injection of pituitrin. This in a few moments will bring delivery of the child. Then it is that I support the perineum, lest it rupture—so strong are the expulsive movements. In a number of my cases, labor has been over in from eight to fifteen minutes after the injection of the pituitrin.

If after an hour after my first injection of hyoscine, morphine, and cactoid the patient feels the pain and remembers everything that has occurred meanwhile, I give the second dose, then wait fifteen minutes or half an hour before giving the pituitrin. When this rule is followed I very seldom need to use the forceps.

If, on the other hand, I am called to a case where there are no labor-pains and the patient is simply tired of waiting, and the head is well down, I often simply give the pituitrin, and in a few moments the child is born, almost before the mother realizes any pains. But you will find that it will please

the patient most if you give the hyoscine, morphine, and cactoid and wait a time for her to rest before giving the pituitrin. Invariably patients will tell you the next day that they did not suffer as much pain as at their regular monthly periods.

If this line of treatment were more generally adopted, and the fact that women can give birth to their babies without even the fear of pain could be more generally known, I believe it would soon make a different feeling among them, and there would be less desire to rid themselves of that monster "childbirth," fewer cases of abortion, and less work for the abortionist.

God grant that the time may soon come when women shall realize their duties and position in life as the head of the nation, that our better type of women may come to the front and be willing to give to the world a better type of mankind and not leave the peopling of this globe to the women of the poorer and lower classes, who, caring very little how things go, and taking little thought about the future, become mothers of large families and at times of worthless children.

There is one other thought in regard to the use of pituitrin, namely, that it not only in most cases terminates labor so quickly, but there is very seldom need of waiting for the placenta, for it usually is expelled within a few moments after the child, and that complete.

NEWMAN H. D. COX.

Arlington, Md.

[There can be no question as to the efficiency either of hyoscine, morphine and cactoid, or of pituitrin. It is not always advisable, however, to use the latter agent, whereas in practically every delivery the sedative combination may be administered with distinct advantage both to patient and accoucheur.

It may be well to call attention here to the fact that there are two ways in which hyoscine, morphine and cactoid may be employed: (1) As a routine measure to induce the socalled "twilight sleep" during *normal* deliveries; and (2) as an anesthetic proper in cases where operative procedure renders a deeper (surgical) anesthesia essential. Naturally, the amount of drug used and the technic employed vary materially according to the purpose for which it is used.

In a certain proportion of cases, the intelligent use of pituitrin would, undoubtedly, arrest antepartum hemorrhage and obviate the necessity for version or the application of forceps, and, as Doctor Cox points out, when it becomes necessary to administer a promptly and powerfully acting oxytocic to a woman under the influence of hyoscine, morphine and cactoid compound, this agent may be used with comparative safety.

Pituitrin acts with extreme rapidity; indeed, several accoucheurs have told the writer that if they do not secure the desired result within twenty minutes they cease to expect it. It must be stated that such failure to act under apparently ideal conditions is not infrequent and has caused many men to relinquish the use of pituitrin. It must not be forgotten either that very serious conditions have presented after the administration of ordinary doses to apparently perfectly healthy women.

We are inclined, therefore, to regard this drug as an extremely useful but not indispensable addition to the obstetrician's armamentarium—as a potent agent to be used carefully when certain well-defined conditions are present and when parturition is unduly prolonged. That it may be administered under such circumstances to patients already under the influence of hyoscine, morphine and cactoid is decidedly an advantage, but to regard it as a desirable addition thereto in any or all slow deliveries is, we think, unwise.

We have much yet to learn regarding the action of pituitrin and before subjecting the system of any parturient woman to the effect of this drug plus that of hyoscine and morphine, we must, if we would keep a clear conscience, feel convinced that the end will justify the risk.

It is in ordinary accouchments that hyoscine, morphine and cactoid proves most useful. Correctly used, by an unhurried attendant, it not only dissipates fear and pain but produces conditions which favor gradual (and, therefore, natural) expulsion of the infant. The use of pituitrin under such circumstances could not be deemed desirable.

That under certain conditions hyoscine, morphine and cactoid and pituitrin can be used conjointly, Doctor Cox has clearly proven, but where the combination—or pituitrin alone—can be used to advantage occasionally, hyoscine, morphine and cactoid can—and should be—employed in *every* delivery. Sooner or later it will be so used.—ED.]

THE DOCTOR'S HORSE: HELP WANTED

Please give me, if possible, the formula of the patent medicine, used in the treatment of horses, known as "absorbine." I also should

like to have the formula for what is known as "caustic balsam," and one for a good horse liniment—one that will not take off the hair.

In order to increase the progeny of a stallion by means of artificial impregnation, what technic should be employed, when one mare is served and other mares are to be impregnated with the same seminal discharge?

I have a fine driving-horse which has the heaves. What treatment can you suggest. Is pulverized lobelia good? If so, how should it be employed, and in what dosage?

Also, my horse has a chronic cough and occasionally has a discharge from the nostrils. There seems to be irritation in the throat near the jaw-bone. Drinking seems to irritate the throat, and pressure and rubbing along this region will induce an attack of coughing. A liveryman has told me that the tonsils are affected and that counterirritation would be good. I shall appreciate any suggestions.

C. W. HUNT

Brevard, N. C.

[Not being a veterinarian, I referred Doctor Hunt's inquiries to my friend and colleague, Dr. N. S. Mayo, secretary of the American Veterinary Medical Association, who comments as follows:

"I regret that I cannot give you the formula for Gombault's caustic balsam. It is an old counterirritant that has been on the market for many years. The formula has been printed in many journals, but I am unable to find it now.

"Absorbine is said to be composed of the oils of tansy, spearmint, and sassafras, with alcohol. It is a mild counterirritant.

"A formula for a good veterinary liniment is as follows: Strong water of ammonia, 1 part; oil of turpentine, 1 part; water, 1 part; raw linseed-oil, 4 to 6 parts. Mix and shake thoroughly. This liniment will blister if it is applied frequently, as will nearly all veterinary liniments. If a very mild action is desired, increase the proportion of linseed-oil, and apply with little friction.

"There are two methods of artificial insemination of mares to increase the progeny of a stallion. In either, the animal is first allowed to serve a mare and then the semen is collected from the cul-de-sac on the floor of the vagina, just below the opening of the os. By the first method, an impregnating syringe is used, the semen thus collected being injected into the uterus of another mare that is to be bred. This syringe can be procured from Truax, Greene & Co., Chicago, or from any other instrument dealer. The second method of impregnating consists in filling gelatin capsules with the semen collected as described. Usually a 1-dram capsule is used, this being inserted into the uterus of the mare.

"Frequently about one ounce of semen can be collected by holding a dish beneath the penis of the stallion as he withdraws after serving a mare. The vaginal method, however, is the best. The semen must be used immediately. Artificial impregnation is extensively employed by horsemen, and 70 percent of the mares so treated become pregnant.

"The best remedy for the treatment of emphysema (heaves) in horses that I have found is Abbott's emphysema compound, which is available in tablet form. It is listed on page 203 of Abbott's prices-current.

"Your friend was mistaken when he diagnosed the cough as due to abnormal tonsils. It is possible that there may be pus in the guttural pouches. If possible, have a well-qualified veterinarian examine this horse. However, if pus is the cause, it is probable that the polybacterins (equine) will give permanent relief. Some of the veterinary liniment described may also be rubbed into the throat once daily."

We hope that the information given may be of value to Doctor Hunt, and to other readers of CLINICAL MEDICINE who are interested in the ailments of the doctor's horse.—ED.]

DIONIN IN SYPHILIS OF THE EYE

The subject of this report is a boy about seven years of age. This boy has the typical Hutchinson teeth. His father's death followed syphilitic involvement of the brain. The mother is living; although she has had two abortions, shows no evidences of syphilis. Two other children are living, and in them no signs of the disease are visible. The boy in question showed no evidence of syphilis until about two months ago. The symptoms started with pain and swelling of the knees, which the mother took to be rheumatism.

I first saw the boy about a month ago, when his knees were very badly swollen and one eye was inflamed; there being much congestion and opacity of the pupil and posterior chamber. I applied to the eye a solution of zinc sulphate in rose-water, and gave a prescription for biniodide of mercury for internal use. The next day the eye was worse. Then I dusted in a little calomel, and re-

peated that the next day. Then for about a week I alternated, day by day, the zinc-sulphate lotion and the calomel. However, the eye grew worse, cloudiness increasing and keratitis and adhesions developing. I now began to realize that something more serious must be done.

Mixing equal parts of a solution of dionin and atropine, I personally instilled this into the eye three or four times twice each day, and then wound up each such treatment by applying a 10-percent solution of argyrol. Under this line of treatment, the eye remained about the same for about one week, when I noticed a change for the better. Then I left off the argyrol, for fear of some corneal opacity occurring, but have kept up the dionin treatment.

There has been a gradual, continuous improvement, with lessening of the corneal opacity. The pupil now is almost clear and all the keratitis is cleared up. I shall continue this course, although not so persistently, until the pupil is entirely clear. No adhesions remain.

As these cases are very stubborn under any form of treatment, my results in this instance will justify me in resorting to similar treatment in like cases hereafter presenting themselves.

C. M. McCuiston.

Mt. Clemens, Mich.

FISTULA IN ANO

Dr. Charles J. Drueck, in the July issue of your esteemed journal, answers Query 5993. Will you kindly permit me to give a correspondence which I had with Doctor Drueck, which appeared in the December issue (of Clinical Medicine) of the year 1906, and reads as follows:

"In the October issue of your esteemed journal, there is an article by Dr. Charles J. Drueck, on fistula in ano, of which article I wish to say that it is incomplete, since it does not mention the fact, demonstrated by me, that simple and complete rectal fistula (which is neither syphilitic nor tuberculous) can be healed promptly, completely, and permanently by means of carbonic-acid gas application. This method of treatment was first described in *The New York Medical Journal*, in January, 1903, and then in my book ("Carbonic Acid in Medicine"). Cases successfully treated were demonstrated before two New York medical societies."

Doctor Drueck did not reply, and now, after seven years, I beg again to bring this matter before the profession.

I have demonstrated and published my observation, that we can make the diagnosis, if an anorectal fistula is a complete one or not, by passing carbonic-acid gas through the external orifice.

When we inflate the rectum with the gas, very soon a pleasant sensation of warmth will be felt; and this same senastion of warmth is experienced if the fistula is a complete one and the gas passes through the sinus into the rectum. In case the fistula is a complete one and neither tuberculous nor a syphilitic affection, the diagnosis will at once be the cure; that is, in a very few sittings the fistula will completely and permanently be healed.

This method takes most thankless cases for operation from the surgeon and gives them to the general practitioner, who has no experience in operating on rectal fistula. A special advantage of this method is that, instead of causing pain, as probing does more or less, it is a rather pleasant procedure for the patient; where there has been pain the gas application will give relief.

A. Rose.

New York, N. Y.

ABDOMINAL HERNIA COMPLICATING DELIVERY. SOLIDIFIED AMNIOTIC FLUID

In looking over my memoranda of some interesting cases, I came to this one and thought it worth offering for publication. The condition may not be a rare one; still, I have read no report of a similar finding.

Being called to confine a woman whom I had never met, I found a well-developed primipara of 28 years in active labor, who had an extensive congenital ventral hernia that extended from the umbilicus almost to the pubes. She had had good health both before and during pregnancy and thought she had carried the child for ten months.

I found the os partly dilated, but there was no mucous secretion and the vagina was dry. According to her statement, there had been no previous escape of fluid. Contractions of the uterus were strong and with each pain it would force its way through the hernial opening; and even by applying a tight abdominal band and firm pressure with the hands I could not at times prevent its escape through the abdominal wall.

No progress was being made; so, knowing the child to be dead, I forcibly dilated the os, and then found that the amniotic fluid

had changed to a glue-like substance that would stretch from thumb to finger without breaking and which was very sticky.

I had given one full-strength hyoscine, morphine and cactoid tablet before dilating the os and soon afterward introduced my hand into the uterus and made a podalic version, though with considerable difficulty; much strength was required to deliver the child. The placenta was hard and remained in the molded form produced by traction through the canal. I irrigated with hot salt solution and used gauze sponges to wipe from the uterine walls as much of this sticky substance as possible. There was no hemorrhage whatever.

The lochia came on scantily and ceased after ten days. The woman made a good recovery. Afterward the hernia closed successfully, and she has had good health since, but has not become pregnant in the four years now passed. What caused the peculiar local condition?

W. F. Schrader.

Fort Wayne, Ind.

[Can any reader report a similar experience or offer an explanation? Apparently after the death of the fetus the liquid portion of the amniotic fluid was absorbed, leaving behind the solids in gelatinous form.—Ed.]

A CASE OF ROCKY MOUNTAIN SPOTTED-FEVER

The patient in question is a man 30 years of age and weighing 190 pounds and I was called on the second day of his sickness. He had a pulse full and strong, and a temperature of 104° F., and he complained of headache. The urine was scanty, the liver was enlarged, and the patient was constipated.

First thing, I gave a large dose of a purgative, followed by the regulation intestinal antiseptics—the combined sulphocarbolates—but was surprised to find that, after the purge had worked well and the intestinal tract had been cleaned with the antiseptics, the patient's temperature continued at around 104 to 105 degrees. So, I started in with the defervescent compound (aconitine, veratrine and strychnine) and sponge-baths.

The next morning the diagnosis of Rocky Mountain spotted-fever (or tick-fever) was easy. The patient was covered with red spots about one-fourth of an inch in diameter and less than an inch apart, the entire body, from head to feet, even the palms of his hands being involved. The pulse was not as strong as at first; respiration, 50 per minute. By about the seventh day the morning temperature stood at about 104° F., and evenings around 105° to 106° F.

I kept up the intestinal antiseptics; I also pushed calcium sulphide and echinacea, while the bowels were kept open with a saline laxative. Frequent sponging with cold water and magnesium-sulphate solution helped in controlling the temperature. Other symptoms, especially wavering of the heart, were treated as indicated. (Our altitude here is 6500 feet.) The patient was delirious at times when the fever reached the highest (about the seventh day), after which it gradually fell, until on the twelfth day the temperature was normal and the spots had disappeared.

At this point the man was very weak and had lost 26 pounds in weight, and his heart was irregular. Under cardiants and general tonics, he gained rapidly. He was able to sit up on the eighteenth day and walked a little on the twenty-first. It is now six weeks, and his weight is now nearly normal; he says he never felt better in his life.

I am reporting this because I find very little about the subject in the textbooks and journals. As this disease is common in the state of Nevada, I should be glad to see reports on other cases, and the treatment followed. If others with more experience with Rocky Mountain spotted-fever than I have (this is my second case) can tell of a more effective treatment, I shall be very glad to hear about it.

E. B. Todd.

Rochester, Nev.

THE OLD DOCTOR

I have before me a poem entitled, "A Doctor of the Old School." The poet goes on to say that "his face was beloved by all," that he was "our old family doctor—everybody's friend, always ready to lend a helping hand; the rich and poor were alike to him," and so on.

Now, it does seem to me that, if the modern up to date physician would emulate the example of the doctor of the old school, it would be better for the coming generations. While it is true that we are progressing in the science of medicine, our surgeons are doing remarkable work, and our sanitarians are doing excellent work in the domain of preventive medicine, still, it seems to me the kindly feeling and associations that the old country doctor held with his patients is

lacking in this modern system or school of practitioners.

Is there not a psychological element lacking in the up to date doctor that was a predominating factor in the treatment of the old country doctor?

It is true, we can diagnose and treat diseases more scientifically than could our predecessors; but, do we educate our patients so as to enable them to readapt themselves to conditions morphologically, physiologically, and psychologically in order that they can maintain a stable existence, commensurate with a normal and healthy individual?

Did not this "old family doctor," in his friendly way, give advice that was heeded? He may not have known why he did those things, but his advice always was good. Instead of allowing the alimentary tract to be closed up, he prevented intestinal stasis and the like, by telling his patients, in a crude way perhaps, how to avoid these pernicious habits.

He came nearer practicing biochemistry and psychologic therapeutics than does our present up to date physician. Now, this word "biochemistry"—which is such a great bugbear to many "ethical" physicians of today—I believe is to become more familiar to us as we advance in scientific medicine.

We are confronted by the words, "Back to the farm," in almost every newspaper we pick up. It seems to me that we, as physicians, would do well to engrave upon our banners the watchword, "Back to fundamentals," and to travel underneath that banner.

There is no question about the fact that, if you take the psychological part of medicine away, you have taken away two-thirds of the best part there is in the healing art. The child should be so educated that it will be in perfect health. If it is deficient in any respect, correct that deficiency by replacing these tissue-salts that are deficient. This brings us to the best method of administering these salts.

I have never been much stuck upon mixtures of any kind, but occasionally combinations can be made and used advantageously. I believe the intravenous method is the best and surest way to give these tissue-remedies, because the deficiency is to be found in the blood current, and, by putting them directly into the current, a more direct and sure and prompt result is obtained.

I have been employing vaccine-therapy quite extensively and find it far superior to other remedies in many diseases. Rheumatism can be cured more often than by any other known form of treatment. But you must know how to use it, and when. Much of the discredit placed upon this form of treatment is because of the fact that the wrong vaccine is given.

This article is not written so much to discuss therapeutics, as to show up the "old doctor" in a better light than perhaps can be shown some of his successors. Who made the medical profession what it is today? Certainly not the young upstart who is trying to deprive the old fellow of the right to practice medicine. Those old fellows paved the way, and they should be honored instead of being pushed aside—and shame upon any state or the nation that deprives them of that right.

T. H. Line.

Marquette, Neb.

ABDOMINAL TUMOR WITH LAPAROTOMY

Senorita Gertrudes Enriquez, age 36 years, virgin, had a very large abdominal tumor, so that she measured around the abdomen at the umbilicus 48 inches, and from the symphysis pubis to the sternum, 38 inches. The tumor gave rise to intense dyspnea. When I saw her on April 8, I introduced the exploring trocar, bringing out a dark, greenish fluid. My diagnosis was, ovarian cystic tumor on the right side. (This, though, was a mistake.)

Two hypodermic injections, two hours apart, of one tablet each time, hyoscine, morphine and cactoid, then 1-2 ounce of chloroform by inhalation, completed the anesthesia. Duration of the operation, fifty-five minutes.

I made an incision ten inches long, the patient being placed on her side. The cyst was opened a distance of three inches, this letting out a dark fluid measuring four gallons. There were two short pedicles, one attached to the fundus of the uterus, the other to the abdominal wall on the left side. The pedicles were secured, transfixed, interlaced, and cut, and the peritoneum sewn over the face of the stump.

Then, to my great surprise, higher up in the abdominal cavity was disclosed another large cyst, which was treated in the same manner, letting out three and one-half gallons of fluid. This also had two pedicles, one attached to the spleen and the other to the abdominal wall, but very little adhesions to the intestines. Proper toilet of the peritoneum and closure of the incision completed the opera-

tion. There followed uninterrupted healing of the wound and complete recovery, the patient leaving, cured, May 4, riding mule-back twenty-seven miles over a rough mountain-trail.

I find that, in using the hyoscine-morphine tablets in two injections, two hours apart, and one hour after the last injection, then commencing with the chloroform and operating at the same time, very little chloroform is required, and I never have had any dangerous after-effects.

In this case, not more than two ounces of blood was lost during the entire operation, aseptic surgical technic being scrupulously carried out.

W. M. Steel.

Ocampo, Chihuahua, Mexico.

CONGENITAL STENOSIS OF THE ESOPHAGUS IN A BABY

In looking over my volume 1912 of The American Journal of Clinical Medicine, I noticed Doctor Dodds's article on page 660, (June number), on an unusual abnormality of the esophagus in an infant. This reminds me that I also have encountered a similar case, a girl baby born February 11, 1911, to one of our missionaries.

The baby was constantly being troubled with mucus in its throat, which re-formed as fast as we cleared it out. The child, perfectly normal in every other way, was hungry and nursed all right, but after a while the milk would sort of choke it and then come back through the nose. A small catheter was introduced, but it could not pass a certain point in esophagus.

As it could not get any nourishment the child gradually wasted away and died in five or six days. No postmortem examination was performed, but, if it had been, no doubt we should have found a similar condition as that reported by Doctor Dodds.

E. C. Wilford.

Tzeliutsing, Sez., West China.

THE ICE-BAG IN APPENDICITIS

In his "Medical Treatment of Appendicitis" appearing in Clinical Medicine for March, Dr. R. L. Vioran quotes Dieulafoy as recommending absolute rest, liquid diet, and the ice-bag, and further says, "Opium should be regarded as dangerous."

The principal point I wish to touch upon is the use of the ice-bag in appendicitis, as well as to call attention to the article by Dr. A. M. Fauntleroy, surgeon, U. S. N., in *The Medical Record* for August 3, 1912, entitled, "The Ice-bag and Appendicitis," calling it "a warning with reference to the more or less common use of the ice-bag in this condition." In this article, from which I quote the following passage, 70 operated upon were reviewed:

"The ice-bag" he writes, "had been used in about 50 per cent of all the cases prior to being sent for operation. The cases were as promptly operated upon as their condition seemed to indicate, and in cases where the ice-bag had been used, sometimes one day sometimes two days prior to operation, there was a noticeable lack of effort on the part of nature to wall off from the rest of the abdominal cavity the appendix, which was frequently very much congested, gangrenous or perforated. It was also noted in these ice-bag-cases that there was a surprisingly low white count when one took into consideration the condition found in the adbomen at the time of operation. On the other hand, in those cases in which the hot-water-bag or morphine had been used prior to operation (the ice-bag not being used at all), the white count corresponded to what one would expect from the condition encountered in the abdomen, and in the type of cases mentioned there was also a distinct walling off of the acutely inflamed or gangrenous appendix from the general peritoneal cavity, showing that nature had been able to use successfully all of her forces in localizing the process. In view of these observations, I am forced to conclude that the ice-bag is distinctly harmful in appendicitis, and should never be used."

Appendicitis is met with on board ships, where one is very much out of the reach of well-equipped hospitals or skilled assistants, so that a laparotomy is not rashly done by the ship-surgeon alone while there is any hope for the patient from medical treatment. One swallow does not make a summer nor does it quench a big thirst, but rehearsal of a few of the cases which have come under my care on ship-board will indicate the reason for my preference for the hot-water-bag over the ice-bag.

A fat man of middle age, asthmatic, was seized with severe pains in the iliac region, with subfebrile temperature and an intermittent but not much accelerated pulse. A distinctly convex tumor presented in the same region, but nearer the iliac crest, as McBurney's point; nausea was present, also Rovsing's sign and tenderness on pressure over the tumor.

The bowels were emptied by means of castor-oil and effervescent saline. Hyoscine, morphine and cactoid relieved the pain. The hot-water-bag was applied without cessation until pain and swelling had disappeared. Aconitine controlled the fever. Food was absolutely withheld while symptoms of irritation remained, water being allowed in small quantities. On the twelfth day the patient was discharged cured.

A young woman reporting exhibited unmistakable signs of appendicitis; said she had been through previous attacks. Like treatment produced like results in thirty-six hours.

One of the under-stewards, about thirty years of age and in good health, had a sudden and sharp attack, with chill, vomiting, localized tenderness, following diffused pain in the epigastrium, with Rovsing's sign present and moderately high temperature. In three days, under the foregoing line of treatment, he was able to resume duty.

I use hyoscine, morphine and cactoid in such cases when desiring to relieve pain and have no fear of masking symptoms or of causing nausea, vomiting or constipation as after morphine alone.

S. Austin Davis.

Pier 8, Brooklyn, N. Y.

REFRIGERATION WITHOUT ICE

In view of the increasing difficulty of securing sanitary water supplies and the doubly serious problem of sanitary ice, the appearance on the American market of a little refrigerating machine, suitable for the family refrigerator, is of the greatest importance. This machine is of French origin, and has been in operation in that country for something like seven years. It is arranged so that it can be applied to any refrigerator (and in the larger sizes to a series of refrigerators) and produces temperatures lower than can be secured with ice, giving a dry cold and the better sanitary conditions that go therewith. At the same time the machine makes such actual ice as is required for table use and for drinks, and holds ready for instant use enough ice to take care of special requirements, such as making ice cream, etc.

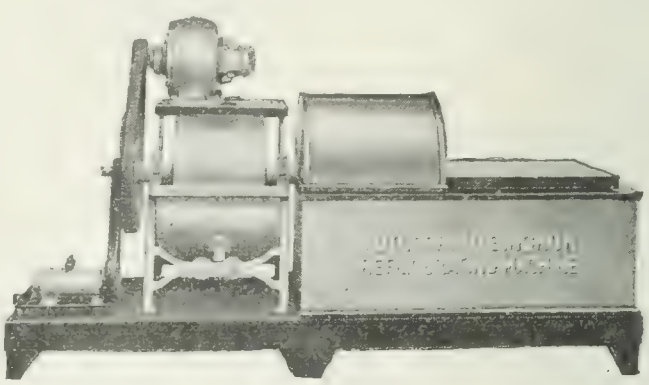
The difficulties which have up to the present time stood in the way of sanitary household refrigeration have been the complication involved in all the refrigerating machines available, and the danger involved in their complication. Most of these machines have used either ammonia or carbonic acid, both of which are subject to considerable danger of explosion from improper handling of the machine. It is a well known fact that any serious exposure to ammonia fumes is very apt to be followed by an attack of pneumonia.

The cost of operation of former machines has also been a serious handicap.

The appearance on the American market of the French machine above referred to; namely, the Audiffren-Singrun refrigerating machine, makes an advance in the art of refrigeration along very original lines.

It is the invention of the Abbe Marcel Audiffren, a professor of physics at the former Catholic College at Epinal, France. The machine is so simple that as it is arranged for use in this country it is started or stopped by a single motion. There are but two bearings to be oiled. The machine makes less noise than does the motor which drives it. There is no possibility of any explosion due to the action of the machine. As the manufacturers put it; "If the operator turns on the water and power, the machine turns on the cold."

In appearance the Audiffren-Singrun refrigerating machine is practically a large dumbbell with a pulley on the end. It consists of a shaft having a hollow drum on one end, another drum at the middle, and a pulley at the other end. The machine is carried in two bearings, the first being placed horizontally and the bearings being on each side of the drum at the middle of the shaft. When the machine is revolving in these bearings the end drum becomes cool and the drum at the middle becomes warm. Water is kept



supplied to the middle drum to keep it from becoming too warm, and the cooling effect of the end drum is used to cool brine (common salt and water) which brine is then circulated through cooling coils which may be placed wherever it is convenient.

The machine operates by causing a liquid to evaporate in the drum at the end of the shaft, drawing the gas resulting from this evaporation into the middle drum through a passage in the shaft. In this middle drum

the gas is compressed and returned to the liquid state after giving out its heat, and is then allowed to pass back to the end drum through a second passage in the shaft to be re-evaporated and repeat its cycle of operation.

The working parts of the machine are hermetically sealed within the drums and are lubricated by a bath of oil, which together with the refrigerant is charged into the machine in the factory and remains permanently.

This feature of hermetically sealing and the permanence of both the lubricant and the refrigerant is the most striking thing about this machine. There is no breaking down of the refrigerant and none can escape, so that this part of the apparatus is permanent. The oil is protected from oxidation and also from dirt, thus avoiding the two sources of deterioration of oil. Upon this fact, and upon the skilful design of the parts so that they are constantly subject to the most thorough lubrication, the life and success of the machine depend.

Those who are familiar with the laws of thermodynamics will realize at a glance that the machine automatically operates under the very best possible conditions as regards economy, whereas, in the old type of machine economy cannot be secured except by the most constant and skilful attention.

Refrigeration secured by these machines is applied to practical service by pumping the brine which has been cooled up to and through the cooling surface which may be placed in the refrigerators to be cooled. Various designs of cooling surface have been developed for use with the machine, a number of which have been developed in this country in adapting the machine to the different conditions existing here. The machine is also arranged so that it starts and stops automatically under the control of the temperatures in the refrigerator being cooled. In this way no power is wasted. When the requirement for refrigeration ceases the consumption of power and water is automatically cut off.

The ice which is made by these machines is made from the same supply from which the drinking water is drawn. As a result the ice may be placed directly in the water without any possibility of contamination and without the flat taste that distilled water ice has. This ice is invariably opaque, due to the salts and the air which all natural waters carry in solution. For almost all service, however, this opaqueness is of no importance, and when the reason for it is understood there is little objection to it.

There are in the neighborhood of a thousand of these machines in service in France and her colonies, and the American builders of the machines, the H. W. Johns-Manville Co., New York, have now several hundred in service in this country.

MEDICAL MISSIONARIES

It was Rudyard Kipling who spoke of medical missionaries and common missionaries. It is not my wish to speak ill of any missionary, but to speak well of medical missionaries. All through Palestine, Egypt, and Syria I found noble medical missionaries who had been working at their posts for ten, fifteen, twenty, thirty years.

I well remember coming into Tiberia one night, a town on the sea of Galilee six hundred feet below the level of the sea. I asked the hotel-keeper whether there was a medical man in town, and he referred me to Doctor Torrence. I found him sitting at home, looking happy with his three children, third wife and third mother-in-law sitting about. He was a Scotch doctor and had been twenty-nine years in the field at this place. He conducted a small hospital, had a native assistant, several nurses, and all the patients he could accommodate.

He entertained me kindly, and the next day he and his American wife traveled with me over to Nazareth and spent two days showing me the country. The Doctor could do this, for he had walked, ridden, and driven over every bit of this territory many a time. It was touching to see the devotion of the people of that section to their doctor.

At Nabulus, a fanatical Mohammedan town (ancient Shechem), where it is not safe for a Christian to go out alone, I found Doctor Clark working away. He had been there ever since he and I were students together at St. Bartholomew's Hospital at London.

At Assiut on the Nile, I found my old schoolmate, Dr. L. M. Henry, doing noble work, and he had been there for twenty-two years. He began practice on foot, then rode a donkey, next a horse, and now he has an automobile. It is interesting to hear him tell some of his early experiences out in the villages, where he used to call himself fortunate to find a bag of onions to sleep on—onions and bedbugs being mutually exclusive.

E. S. McKee.

Cincinnati, Ohio.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

I SHALL continue my articles upon hysteria and certain other complaints peculiar to women by describing other types of hysteria.

To the sensual type of women, voluptuousness is the aim of life and the center of her acts and thoughts. She is well endowed with guile and is extremely diplomatic. She is full of *finesse*, but not very delicate; her lack of scruple spoils her tact. She is ruseful, dissimulating, and unconsciously mendacious. She despises friendship, and needs watching. If circumstances permit, she loses all delicacy, reserve, and modesty. She is destitute of scruples. Her crimes are coolly remorseless.

The woman of the neuropathic type is one to whom the grasshopper is a burden. Her nerves are always on edge. She is a heroic invalid, who displays the air of a martyr about trivialities. This character of the hysteric recalls, as Kiernan remarks, the observation of Milne Edwards concerning the monkey-character. Levity is one of its salient features and its mobility is extreme. One can induce such a one to shift in an instant from one mood or train of ideas to another. She is now plunged into black melancholy, and in a moment may be vastly amused at some object presented to her attention. To these qualities this character owes its teasing tendencies.

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One of the mental expressions of hysteria is the tendency of the patient to accuse either herself or others of sexual immodesty. Of such frequent occurrence and so well known to physicians are such accusations that a man trained in the traditions of the medical profession is obliged to regard any confession made by a woman, as to her unchastity and implicating a physician, as being of morbid origin. The court records of all countries are blackened by cases in which physicians have been condemned innocently on the confession of hysteric women. Confession, moreover, has long been regarded by jurists as of very dubious value as an evidence of guilt.

The number of hysteric confessions is exceedingly large. In a case reported by Le Grand Du Saulle ("Les Hysteriques"), a hysteric woman caused to be sent five men to Cayenne (the French penal settlement) on a charge of rape. A member of the French Medico-Psychologic Association suspected, from an after-examination of the alleged victim, that the whole story was of hysteric origin. Through his efforts, the innocence of the convicts at Cayenne was demonstrated, and they were released from their unmerited confinement.

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Toulmouche observed the case of a young girl given to devotional exercises and much inclined to flagellation and asceticism. This young woman one day cut herself with scissors six hundred times on various parts of the body and then asserted the wounds were inflicted by a man who tried to outrage her. She finally confessed that the wounds were all self-inflicted.

Huchard had under observation an 18-year-old girl who accused the vicar of the parish of having raped her. She stated that one day, while she was praying in the church the vicar shut all the doors and requested her to go with him to the sacristy. There (she claimed) he made obscene proposals to her and, when she indignantly refused, he pointed a dagger at her; she fainted, and during the faint (she alleged) he violated her. Upon being questioned during the trial, her replies excited the suspicion of the medical expert. An examination ordered by the court revealed that she was still a virgin.

Tardieu has reported the case of an inmate of a Gascony convent, who claimed to have been made the victim of all sorts of outrages therein. Her father, with full faith in what she told, denounced the alleged criminals. Finding, however, that his daughter's story was untrue, he took his life. In another case cited by Tardieu, a girl charged two young men with having violated her and introduced into her rectum and vagina stones, splinters and iron, which had to be extracted under

great pain. She had convulsive seizures followed by paralysis. The two men were convicted, and it was not until they had been in prison for more than a year that the false nature of the accusation was discovered.

W. A. Hammond reports ("Treatise on Insanity") the case of a 22-year-old girl, who carried on a systematic course of deception for several months, and not only greatly injured an excellent young man, but damaged her own character to such an extent that her family were compelled to move from where they lived. The patient, by wearing pads over her abdomen and gradually increasing their thickness, led to the inquiry, because of her mother's suspicion, as to whether there existed an abdominal tumor. It was decided to consult an eminent gynecologist, when the girl, in tears, lamentations, and self-reproaches, confessed that she was pregnant.

Of course, the distress of the family was very great. A great deal of anger was exhibited toward the supposed miscreant who had ruined a virtuous woman. For a long time the girl refused to name her seducer, but finally, one morning, she came downstairs with a letter which she had written to her father, in which a full (though false) revelation of all the circumstances was made. In this letter she declared that a gentleman they all knew and respected was her seducer. Arrangements for her confinement were made in a distant city. At the same time it was resolved by her parents to arrange, if possible, for a marriage with the alleged destroyer of their daughter's honor.

The father, accordingly, had an interview at which the gentleman was offered the alternative of immediate marriage or instant death. Denials and protestations were useless. He consented to a marriage, but only on condition that he should be granted an interview with the young woman in the presence of her parents. This was agreed to. A meeting took place at once and the gentleman, who was a lawyer, succeeded by his tact and the directness of his questions in exposing the fraud and obtaining a full confession.

According to W. Goodell, the operative procedures of Sir James Simpson, which were at first so wonderfully successful in coccygodynia, owed their effects to the hysteric nature of those attacks. Strange as it may seem, the coccygeal joint is liable to serve as a barometer of a kind of mental worry. Hence, the serious surgical blunder not infrequently is made, of extirpating for sheer hysteric coccygodynia this important bone—important because of its muscular origins and insertions. Simpson has known coccygodynia to attack a lady after the death of her mother. All treatment failed, but it was finally abruptly cured by her great resentment of the second marriage of her father.

Gallstone-colic may occur in hysterics as a result of emotion, without discoverable cause in the intestinal evacuation. Kiernan has reported cases in which the colic has recurred coincident with jealousy and had disappeared upon increased attentions from her husband. As C. K. Mills has shown, many of the symptoms of appendicitis may be mimicked by hysteria. These are the cases which are so often cured by Christian scientists, Dowieites, and metaphysicians.

Besides the limitation of the visual fields to white light, there exists at the same time decided disturbances of the color-fields, as Preston points out. There may be total loss of color perception, achromatopsia or only a disturbance of the relative position and extent of the different color-fields. The first of these conditions—achromotopsia—is not common, at least not in this country. When it exists, all objects appear of a uniform gray or sepia-color.

The second variety of color disturbance is frequently met with in hysteria. This consists of a perversion of the normal color-fields or of a reversal of the fields. In the normal eye, the fields for color are not coextensive. Thus, the larger field is for white light, then comes blue, red, and green. The smallest field is that of violet. In hysteria, these relations are altered.

In some cases there is a simple restriction of the color fields in their normal color, but nearly always there is a reversal of the field. Thus, the most frequent change is between the red and the blue. Instead of blue occupying the largest field, as it does normally, its place is taken by red. Parinaud, commenting upon the fact that in hysteria the largest color-field is that of red, is of the opinion that the well-known predilection of hysterics for red may be thus explained

Hysteria of an epidemic type occurs among all nations and races. The epidemic type was especially common during the middle ages and very often furnished the basis for the alleged "witches'-sabbath." Usually these victims of hysteria had visual, auditory, olfactory, and general hallucinations. They had visions of lighted torches, balls of fire,

fantastic animals or imaginary personages. Sounds of blasphemies, lascivious words or horrible suggestions rung in their ears. These subjective symptoms were, as Preston remarks, accompanied by convulsions, contractures, loss of consciousness, and the like. Similar epidemics under certain conditions of excitement, religious and otherwise, occur from time to time among girls, especially in rural towns.

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Some years ago, in a small German village, two young girls awoke one morning, to find their hair had been cut close to their scalp. They related that a person had come in their room during the night and cut their hair. Several other girls subsequently experienced the same thing, and finally one young woman who was to be married the next day also lost her hair. Some of the citizens voluntereed to watch the homes of young women. These citizens received anonymous letters that their whiskers would be cut. On the door of a public building was found the following doggerel:

> We are thirty,
> At night we're spry,
> By day from the pane we spy,
> And laugh at the passersby.
> Now merely the hair we clip,
> Later the head off we'll snip.

It was shown later that the girls and women had cut off their own hair and also indulged in other pranks. The performers had hysteric anesthesia and convulsions.

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Hysteric convulsions usually are excited by some sudden emotion or, exceptionally, by some sudden accumulation of waste material, as in epilepsy and eclampsia. While convulsions of the emotional type are much more frequent among the lower races and the illy trained, hysteric convulsions caused by autointoxication are more frequent among the hysteric nondegenerates of the higher class.

Sometimes the motor disturbance of the convulsion is confined entirely to pantomimic expression of emotion, such as wringing the hands. As a rule there is in these conditions some muscular rigidity. To some degree the character of the patient modifies the attack. While consciousness is not lost, it is somewhat disturbed and the identity of persons around the patient is confused.

In the mild type, as Preston remarks, the limbs are under control of the patient's volition. If the patient be lying on her back on the bed or floor, she will kick her feet violently and throw her arms about in distinctly purposive manner. Quite often she will seize someone standing near. Efforts at forcible restraint will markedly increase the violence of the movements. As a rule there is no disturbance of the circulation or of respiration. The pulse is not increased more than the active exertion would warrant, and if there be no great physical effort it remains quite normal. The respiration is normal, except in certain cases of "hysteric rapid respiration," when it becomes very quick and shallow. The face is neither pale nor congested. There is a peculiar and rather characteristic quiver of the eyelids when the eyes are closed, which is of considerable diagnostic value. The pupils show no constant or characteristic change. This minor attack may last from a few minutes to several hours, and when it subsides the patient may be a little depressed or even appear quite normal.

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There are no very distinct prodromata, although the attack usually can be traced to some distinct or seemingly trivial exciting cause. The first, or epileptoid, period of the hysteric convulsion resembles grand-mal, although to this there are numerous exceptions; the patient does not bite the tongue nor in falling does she injure herself. Generally she sees and hears nothing. The eyelids oscillate slightly, but the claim that usually the patient is peeping from under her eyelids is untrue.

The first phase of the epileptoid period is one of rigidity, the arms and legs usually being extended and the hands clasping the trunk mildly opisthotonic. The breath is arrested and the pulse accelerated. Consciousness is obscured and even lost, although not to the extent as in the epileptic. Generally pressure over the ovaries or the faradic current will arrest the attack. These, however, are exceptions; for, in some hysterics, pressure on the hysterogenic zones, such as the abdomen, over the ovaries, and the inside of the thighs, may be followed by increased lethargy and unconsciousness.

Tourette reports the case of a girl who was seized by the thighs, thrown into lethargy, and thereupon violated. Mabille has met with a similar experience. Brourardel reports the case of a girl of twenty-three who, being raped during a hysteric crisis, became pregnant. Her attacks, which began at the time of her father's death, were typically hysteric, the intellectual powers being in complete abeyance. The case was abandoned by the public prosecutor.

Among the Books

JONES: "IONIC MEDICATION"

Ionic Medication: The Principles of the Method and an Account of the Clinical Results Obtained. By H. Lewis Jones, M. D., consultant to the electrical department of St. Bartholomew's Hospital, London. Second edition. Philadelphia: P. Blakiston's Sons Company. 1914. Price $1.50.

Doctor Jones is probably the greatest living authority upon the clinical aspects of ionic medication. He defines this mode of medication as the use of electric currents for their power of setting the constituents of a saline solution in orderly motion in a definite direction. This definition is sufficiently broad to embrace all the ionic actions applied in medicine; for, the tissues of the human body differ in no respect from ordinary saline solutions in their conductivity of electricity.

Most drugs are electrolytes, that is, they allow an electric current to pass through an aqueous solution, but only at the expense of their own disassociation. This is what constitutes electrolysis, or ionization; and this aspect is set forth by Doctor Jones, in his little book, in all of its clinical applications.

Ionic medication yields good results in a large range of diseases, especially that class in which there is a local perversion of metabolism, such as ulcerations, hypertrophies, sycoses, deposits, and so on. It really is a mode of therapy which deserves wider attention than it is receiving. It is not particularly difficult to handle, and in that class of conditions to which it is adapted it certainly does insure the localizing of internal medication, such as is attainable in no other way. Almost every physician nowadays has a wall-plate in his office, and can, therefore, easily equip himself for ionic treatment. Doctor Jones's little manual will give him all the instruction he will need for the procedure.

POPE: "ANATOMY AND PHYSIOLOGY FOR NURSES"

Textbook of Anatomy and Physiology for Nurses. By Amy E. Pope. With 135 illustrations. New York and London: G. P. Putnam's Sons. 1913. Price $1.75.

The reviewer's experience in teaching physiology to nurses has demonstrated to him how difficult a thing it is to determine just what portions of the subject shall be imparted to these aids of the doctor, and just how they shall be taught. Not only does one need the faculty of selection and discrimination in order successfully to accomplish the task, but also the ability to see and understand the nurse's viewpoint. The fact is, this writer has about come to the conclusion that no medical man is of himself equal to the task, unless he puts aside his assumption of superiority and permits himself to be advised and guided by some intelligent personality on the nurse's side of the fence.

By the same token, it is our conviction that no medical man can write a textbook for nurses so efficiently or so intelligently as can a nurse, provided, of course, that she have the necessary information and *mind*. And Miss Pope abundantly confirms us in our opinion. She has produced a book which is just as accurate and up to date in its contents as Howell or Kirke, and she has that angle of view which neither of those two authorities could acquire in a thousand years. It is in very fact a nurse's book; it gives anatomy and physiology as applied to nursing. The reviewer speaks whereof he knows, for he is making use of it himself in his nurses' classes. Incidentally, he is of opinion that it would form an excellent textbook for use in high schools and similar institutions.

KERLEY: "PEDIATRICS"

The Practice of Pediatrics. By Charles Gilmore Kerley, M. D., professor of diseases of children, New York Polyclinic Medical School and Hospital. With 139 illustrations. Philadelphia and London: The W. B. Saunders Company. 1914. Price, cloth, $6.00; half morocco, $7.50, net.

This is not the first book that this author has published on the subject of children and their diseases, but it is the first complete and exhaustive work that he has achieved; and it does him the highest credit. True, we have heard the adverse criticism, that the work is more voluminous and exhaustive

than the subject itself warrants; but with this we in nowise agree. Our idea of the importance of pediatrics as a special and distinct branch of medicine is that it can hardly be exaggerated.

Seldom have we seen a more carefully prepared and comprehensive treatise upon pediatrics than this of Kerley's. It is in every respect precisely what we should have expected, considering the author's character and his clinical work. If we mistake not, it will at once leap into the first place among pediatric textbooks, for it unites with its classic completeness a certain modern virility and breeziness that are lacking in the older textbooks. It is unmistakably the work of a young man—not necessarily young in years, but young in viewpoint and receptivity. Infant feeding, etiologies, prophylaxis, treatment, all are given their most modern and up to date interpretation. One splendid feature we wish specially to point out, is the hundred pages, at the close of the book, devoted to "miscellaneous subjects." These pages alone are worth the price of the book.

STELWAGON: "DISEASES OF THE SKIN"

Treatise of Diseases of the Skin. For Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., professor of dermatology in Jefferson Medical College, Philadelphia. Seventh edition, revised. With 334 illustrations and 33 plates. Philadelphia and London: The W. B. Saunders Company. 1914. Price $6.00.

By the time that any book of the character of the one before us has passed into its seventh edition, the task of the reviewer has become a good deal of a work of supererogation, limited to the statement that "this book continues to maintain its high standard of excellence," or some such stereotyped formula. However, such formulæ, like those of daily life and conversation, admit of being uttered in two entirely different ways. They may be spoken perfunctorily and emptily, or they may be voiced in a hearty and meaning tone. It is in this latter, this genuine spirit that on this occasion of its seventh edition we cheerfully renew our compliments to Stelwagon upon this his excellent production.

Really, the revision of a book on dermatology, so as to catch up with the investigations of the past few years, virtually is equivalent to rewriting it. In this late edition, descriptions of new or recently acknowledged independent disorders appear for the first time, such as prurigo nodularis, benign sarcoid, keratosis blenorrhagica, and others; while the recent researches in syphilis, leprosy, pellagra, ringworm, and various tropical affections find a judicial representation. In short, this work continues to be what it always has been—the last word in dermatology. And this, we repeat, is no mere form of speech, but a genuine tribute to its thoroughness and excellence.

LIPPINCOTT'S "INTERNATIONAL CLINICS"

International Clinics. Edited by Henry W. Cattell, A. M., M. D. Volume I, 24th Series. Philadelphia and London: The J. B. Lippincott Company. 1914. Price $2.00.

This volume of this well-known serial, as is customary with the first volume of the year, contains a comprehensive résumé of the progress of medicine during the year 1913, a goodly proportion of which review is devoted to the sociological aspects of the profession. After this, perhaps, the most striking item is the article by Dr. Victor C. Vaughan, president-elect of the American Medical Association, advocating a plan of health insurance, based upon the frequent and thorough medical examination of all citizens. Doctor Vaughan confesses that he does not conceive that this procedure will go into immediate general operation, but he stoutly asserts that we ought to look forward to its ultimate accomplishment, and should begin to fit medical men for the work.

It must not be supposed that special mention of these two features has any invidious significance. We allude to them merely as samples of the excellent and timely things served up to the reader in the volume in question. There are at least a dozen such between its covers. If The Lippincott Company existed for no other reason than to give us this quarterly of clinical lectures and original articles, it would amply justify its existence.

KOBER AND HANSON: "ILLS OF VOCATION"

Be we financier, industrial worker, navvy, scavenger or merely a gentleman, we all suffer to a greater or less degree from the ills which our vocations or avocations engender. Just how to prevent, ameliorate or cure these but

partly understood ills, should no longer be a puzzle to the man, employer or physician, because a reliable and essentially practical book is soon to appear, under the joint editorship of Dr. George M. Kober, of Washington, and Dr. Wm. C. Hanson, of Boston. Among the contributors may be named such authorities as Sir Thomas Oliver, Legge (London), Teleky (Vienna), Devoto (Milan), Edsall (Harvard), Alice Hamilton (Chicago). P. Blakiston's Sons & Co., Philadelphia, will publish the volume.

CONDON: "A HANDFUL OF FLOWERS'

"A Handful of Flowers with a Sprig of Evergreen." By Amasa S. Condon, M. D. Boston: Sherman, French & Co. 1913. Price $1.00.

Doctors seem to take as naturally to poetry as cats to cream. Is it because the hard realities of life, which are impressed upon the men of our profession, compel the imaginative physician to turn for comfort to the land of poesy and dreams? Or is it because we see deeper into the hearts of men and women than others, and therefore know that romance is not dead? Whatever the cause we can count among our number many a physician who was also a poet. Keats was apprenticed to a surgeon and Goldsmith a qualified practitioner. Our own Holmes was an anatomist as well as the author of "The Anatomist's Hymn," and Weir Mitchell wrote even better verse than he did medical books—and the latter were classics.

In later days, who has struck a happier note than James Newton Matthews, who was "just a country doctor"? And we might sing the praises of our own George Butler—were he not still alive! However, there are precedents enough to warrant any physician with a penchant for poetry in giving his productions to the public in book form. Certainly, our good friend, Dr. Amasa S. Condon, of Ogden, Utah, is to be congratulated on the little book to which it is our privilege to call attention. His "Handful of Flowers with Sprays of Evergreen" contains only a short collection of verse, but the volume is sure to bring pleasure to its readers, among whom there should be many doctors and doctors' wives.

The writer of this review wishes he had space to quote liberally from Doctor Condon's verse than he is permitted to do; but here is a stanza from "Among My Books"—an apostrophe to "Rainy Days:"

So I say, God bless the man
That invented rainy days.
Books and pipes and hearts ablaze.
And through life's uncertain span,
Here's a heart to sing his praise.

Timely, also, is the poem on "Dog-Days," from which we quote the closing strain:

O could I dwell in some sequestered spot,
Most any place with things less blooming hot;
Say some hid-dell by sweet Contentment blest,
With books and birds and woods, nor other guest;
Say where the wimpling Weber gurgling flows
From gushing wells far sunk in glacier snows,
Or the dim aisles of sylvan Idylwild,
Where slabby rocks the mighty Zeus piles—
There woo the Summer in a boreal land
Of shrub and glebe, scathless of human hand;
And lured by the sweet symphony of streams
To dream of youth and love, O dream of dreams!

Doesn't this "taste" make you long for "more"?

HARROWER: "HORMONE THERAPY"

Practical Hormone Therapy: A Manual of Organotherapy for General Practitioners. By Henry R. Harrower, M. D. With a Foreword by Dr. Arthur Biedl, of Vienna. New York: Paul B. Hoeber. 1914. Price $4.50.

For the past ten or twenty years the tide of therapeutic thought and research has been setting steadily toward this one supreme truth, that the human body contains within itself all the necessary potentialities and agencies of defense against disease, and that the business of scientific therapy is to find ways and means of stimulating and utilizing these inherent potentialities and agencies.

One phase of this new truth was exemplified in the demonstration of the body's wonderful system of defense against microbic invasion, of which Ehrlich, with his side-chain theory, was the earliest modern exponent, and which has now developed into the very practical form of vaccine therapy. Latterly, Abderhalden and his school, and others who have been working along similar lines, have given currency to another phase of the same truth, namely, the elaboration, by the body, of principles and ferments and secretions of various kind for the regulation within itself of the functional and structural balance of the body.

To this latter phase belongs what is known as the doctrine of the hormones, which may now be regarded as having reached the stage of a practical mode of therapy at least as definite as vaccine therapy. The author of this book has, for the past five years, been

doing some very painstaking and praiseworthy work in the way of investigation, collation, and clinical experimentation in hormone therapy, and this volume represents the winnowed, sublimated fruit of his work. It is, so far as we know, the only English work which sets forth the hormone doctrine in practical, useable shape.

Like the distinguished writer of the foreword, we too are "struck with the excellent manner in which the author has succeeded in laying before his readers this new branch of therapeutics in a concise and easily understood form." While at present the application of hormone therapy necessarily is limited, it is destined to expand, and before long to become an important factor in general therapeutics. To quote Professor Biedl again: Doctor Harrower has "now placed in the hands of medical practitioners a guide which will enable them to collaborate in working out this problem, and all those concerned, whether theorists or medical practitioners, will be grateful to him for his labors."

GARDNER AND SIMONDS: PRACTICAL SANITATION

Practical Sanitation: A Handbook for Health-Officers and Practitioners of Medicine. By Fletcher Gardner, M. D., and James Persons Simonds, B. A., M. D. Illustrated. 1914. St. Louis: The C. V. Mosby Company. Price $4.00.

In the last number of *The British Medical Journal*, it was seriously suggested that the time had come when no person should be licensed to practice medicine until he had completed a course and received a diploma as doctor of public health. It is, perhaps, a little early to take such an extreme step as that; nevertheless, the fact remains that in these days the general practitioner must be much more than a mere family physician—he cannot evade a large degree of responsibility for the public health and sanitation of the district in which he lives and plies his practice.

This being so, it follows that the physician must have at hand, available for study and reference, some concise, comprehensive manual of public health and sanitation, by which to instruct and guide himself in the efficient performance of these modern duties. There are published several such manuals in England, where the public-health function of the doctor has been recognized and provided for much longer than is the case here; but in this country, so far as we know, no serious attempt has heretofore been made to furnish an authoritative, practical exposition of the subject in a single moderate-priced volume. Authors as well as publisher are to be congratulated upon having accomplished this desideratum in the book under review. They deserve our thanks. We cordially commend Messrs. Gardner and Simonds' excellent manual to our readers, and urge them to buy and to use it.

SIMON: "CLINICAL DIAGNOSIS"

A Manual of Clinical Diagnosis by Means of Laboratory Methods. By Charles E. Simon, B. A., M. D., professor of clinical pathology and experimental medicine, College of Physicians and Surgeons, Baltimore. Eighth edition, enlarged and revised. With 185 engravings and 25 plates. Philadelphia and New York: Lea & Febiger. 1914. Price $5.00.

The two years that have elapsed since the publication of the preceding edition of Simon's "Diagnosis" have brought forth a considerable amount of new matter, this necessitating careful revision and no little addition. In the present edition, the diagnostic methods based upon the appearance of the protective ferments of Abderhalden are given faithful representation. Much of the text dealing with the technic of the Wassermann reaction has been rewritten, and emphasis is laid upon the desirability of a greater uniformity in the use of the various reagents, notably of the antigen. The applicability of the complement-fixation test to latent gonococcus infections having been satisfactorily established, a description of the corresponding technic has been embodied in the present edition, and should prove useful in many cases.

The plan adopted in the previous edition, of dividing the book into two sections, the first devoted to technicalities and the second to diagnostic application, has been preserved in the present one. This is an excellent plan, in that it follows the natural and logical development of interest in the student's mind, while it leads sequentially to the clinical aspect of the subject—which is, of course, the end and purpose of the whole system.

The appearance of an eighth edition evidences that Doctor Simon's brilliant and conscientious work is appreciated by the students and practitioners of the country—by which appreciation, be it said, they do credit to themselves.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6017.—"Masturbation By a Female Child." In my CLINIC for July, Query 6017, "Masturbation By a Female Child," interested me; however, I regret that nothing was said about diet, the use of narcotics, and other pertinent measures.

The child's urine being acid, would indicate that an excessive meat diet might be an exciting cause. Coffee, tobacco, and other narcotics I have found also to be easily removable causes.

A change of the child's diet to cereals for breakfast, vegetables for dinner and fruits for supper, with no meats or exciting condiments (spiced foods, etc.), I think would go far toward helping the girl to break the chains of that terrible habit. In addition, plenty of exercise in the open, with cheerful company of boys and girls, and studies adapted to her capacity and natural bent of mind would complete the reform. Suggestion is also good. The causes as found in the environmental intake must be found, if possible, and removed, of course.

S. J. BROWNSON.

Fort Worth, Texas.

Queries

QUERY 6028.—"Seborrhœa Oleosa." W. A. M., Michigan, writes as follows: "I observe that you lay considerable stress upon the value of staphylo-acne bacterin for acne, and as I have under treatment such a case that is bothering me, I come for advice.

"The patient, a man of forty, has been troubled since he was seventeen years of age. He always has been in good health and robust. For the first four or five years pimples covered his face, back, and chest, which came to a small head and upon pressure yielded a grub-like mass. For the last few years he has been bothered with blocking of the sebaceous glands; if these are squeezed a long worm-like substance protrudes. Occasionally there appears a red pus-filled pimple. The man's skin presents an oily appearance. He has tried, as he puts it, everything and everybody. Sometimes I think he is better, but only to have him come back after a few weeks as bad as ever. If you can suggest any literature on the subject please let me know; or, if you think bacterin will give results, explain the treatment."

We are quite sure that you will understand that in a case of this character permanent results can not be secured from the use of bacterins without the concurrent use of appropriate internal remedies. It is essential that the gross disorder of the body-chemistry be corrected. It appears to us that your patient suffers from seborrhœa oleosa, or stearrhœa simplex. On the face, the favorite site for this disease is the nose and its immediate neighborhood; not infrequently the forehead and other parts of the face are involved. The skin is shiny, and glistening and the gland-ducts are patulous. Frequently the nose is congested and of a dark red tint. Comedones and scattered acne lesions are seen, and in occasional instances the excessive secretion dries, forming thin scales of dirty-gray or brownish-gray color.

Energetic local treatment is essential, of course, and the correct constitutional remedies (the indications, naturally, varying from time to time and with each individual) given persistently. Arsenic, however, is almost invariably of service; calcium sulphide and irisoid, alternated week and week about, have served this writer effectively.

Try washing the skin with carbenzol soap and warm water, then use a 2-percent hydro-

alcoholic solution of resorcin. Should this prove too dry, add a little glycerin. Another, and very excellent, local application consists of the aqueous extract of calendula officinalis with resorcin and a soluble bismuth salt. The use of the vibrator and galvanic current frequently proves beneficial.

QUERY 6029.—"Hypodermic Administration of Mercury." J. T. S., Georgia, desires to carry out Dr. G. Frank Lydston's treatment for syphilis recently outlined in these columns and wishes to know whether the bichloride or the salicylate of mercury in a suitable form for hypodermic use can be supplied.

It is a simple matter to prepare a solution of mercury bichloride, the following being a suitable formula: mercuric chloride, grs. 1 1-2; sodium chloride, grs. 15; sterile water, m. 1550 (or drs. 26). This must be filtered, then thoroughly boiled. From 8 to 16 minims constitutes a dose.

Hare strongly recommends the salicylate, in the form of a 20-percent suspension; as, for example: mercury salicylate, dr 1; sterile alboline, drs. 2. This should be carefully triturated; for, if comminution and mixture are not thorough, the discomfort of the patient will be markedly increased. You will find the full technic explained on page 118 of Hare's "Modern Treatment."

Hare further states that he has attempted to have this alboline suspension of mercury salicylate put up in sealed ampules; but he found the bulb so small and the amount of the material so little that it was difficult to shake up the contents and obtain a perfect emulsion. "Besides," he says, "it is a very expensive and entirely unnecessary refinement of technic." Injection is made only into the glutei, the muscle mass between the trochanteric fossa and middle line, an area with a superficies of six or four inches. The sides of the buttocks should not be used.

Guiteras has the salicylate prepared as follows: mercury salicylate, grs. 48; lanolin, dr. 1; alboline, to make oz. 1. Inject of this 10 minims (equal to 1 grain) once a week.

As you are interested in the hypodermatic use of mercury what follows will interest you, this information being part of a letter we recently wrote to another physician.

Hyrgol (colloid mercury) is administered hypodermically in an aqueous 1-percent solution; the average dose being from 1 to 2 cubic centimeters.

In *Merck's Archives* for January, 1910, Dr. Wm. F. Bernard, Chicago, instructor in genito-urinary diseases at the University of Illinois, has an article on intravenous injection of mercury. He states that he has given 9838 injections, using equally a 1-percent solution of mercuric cyanide and a 1-10-percent solution of mercuric chloride. He gives the preference to the latter.

Foreign authors state that 1 in 1000 is the maximum strength of mercuric-chloride solution; the usual dosage should seldom exceed 1-12 of a grain. Bernard, by gradually increasing the concentration, found that a 1-percent solution could be used with impunity, the maximum dose given by him being 7-10 grain, for several days in succession. Under the circumstances, we suggest that you ask Doctor Bernard for reprints of his various articles.

Besides hyrgol and the salts mentioned, the following derivatives are employed hypodermically and also intramuscularly:

Mercury aminopropionate (1-12 to 1-6 grain); mercury anilinate (intramuscularly) in 30-percent suspension in liquid petrolatum; mercury asparaginate (1-12 to 1-6 grain); mercury benzoate; mercury bichloride; carbamidated mercury (8 to 15 minims in 1-percent aqueous solution); mercury cacodylate (1-2 grain, intramuscularly); mercury cyanide (1-12 to 1-6 grain); mercury formamidate (15 minims in 1-percent solution); mercury glycocholate (8 to 15 minims in 1-percent solution); mercury iodate (1-6 to 1-4 grain, subcutaneously every two or four days); mercury lactate (15 minims of a 1-percent solution); mercury resorcinolacetate (3 minims of a solution of 85 grains of the salt in 85 grains of liquid paraffin, and 30 grains of anhydrous lanolin, twice weekly); mercury succinimide (1-5 to 1-3 grain, hypodermically); mercury thymolacetate (1 1-2 grains every three to five days in liquid paraffin or glycerin); mercury thymolnitrate (similar dose); mercury tribromphenolacetate (8 minims of a mixture of 100 grains and liquid paraffin), 4 1-2 drams once a week; mercury and potassium thiosulphate (1-6 to 1-2 grain, hypodermically).

Any good druggist will be able to prepare a suspension of mercury salicylate for you. Personally, we do not recommend this method of medication; unless extreme care is exercised, most unpleasant results may follow these injections.

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QUERY 6030.—"Basilar Meningitis." J. C. N., Tennessee, writes: "I am treating a boy five years old who six weeks ago was taken with meningitis in a mild form. After

the seventh day there developed a slow fever, obstinate constipation, and continuous severe headache, and at times he would grasp his head, front and back, and scream out, "Oh, my head." He began to complain of his bowels feeling sore, but there was (and there is) no swelling, while the tongue indicates no inflammation. For the last ten days his temperature has been normal, but the pulse runs about 120 to 130 per minute. He has now a vacant, glaring stare, seldom speaks, and before he speaks he will burst out in an idiotic laugh. His tongue has a heavy white coating that so far I have been unable to remove. He demands nothing to eat, but uncomplainingly takes what is given him.

"To keep his bowels open, I give castor-oil and sometimes a laxative saline. Besides, I have given calomel, lactic acid, podophyllin, and salol, trying to clean away the white coat on the tongue; but nothing touches it. The child is very emaciated and weak. What treatment do you suggest?"

You do not mention that you performed lumbar puncture, consequently, we are unable to decide whether you have to do with tuberculous (basilar) or epidemic cerebrospinal meningitis. The symptom-complex described, though, rather leads us to suspect the former; which, usually, is a secondary condition. Is there any tuberculosis taint in the family? Tuberculous meningitis, you know, sometimes runs a rapid course, although it may run on for two months or longer.

Fischer, in his "Diseases of Infancy," quotes the case of a child of five years, of healthy parentage. The child, well nourished, had not been ill before, except for socalled "indigestion." Returning from a visit to the country, the child, apparently in good health, both physically and mentally, went to school; when, however, it came home, it had headache, the tongue was coated, and there was a slight rise of temperature. In spite of cleaning out of the bowels and stomach, the headache persisted, the tongue refused to become clean, and the child cried and moaned and could not sleep.

Treatment for gastric catarrh was instituted; but emaciation progressed; strabismus developed, nausea and vomiting occurred; the child remained in semistupor, crying and screaming with pain. Respiration at this time was slow, and pulse small, compressible, and irregular, ranging between 100 and 160. Later, respiration became labored. Babinski's reflex was present. The spinal fluid was aspirated and examined by Doctor Billings, of the New York Health Department. The latter found tubercle bacilli and diplococci pneumoniæ. Diagnosis: tuberculous meningitis.

Always in similar cases the *tache cérebrale* and Babinski reflex should be sought for. The *tache cérebrale* is produced by drawing the finger-nail quickly over the skin, when a bright-red mark will remain for several minutes. As a rule, the child sleeps with its eyes half open. There may be unilateral flushes, also spastic rigidity of various portions of the body, or all over. If you have access to a copy of Candler's "Everyday Diseases of Children," you will find it well worth while to study the chapter descriptive of meningitis.

In cerebrospinal meningitis, fever is gradual but persistent, the temperature rising to 103° F. or more on the first day; the maximum being 105 to 106 degrees. Occasionally the reverse conditions obtain. Here, the temperature is subnormal throughout; the pulse is extremely rapid; pupils are dilated or unequal; there is more or less contraction of the head; not infrequently opisthotonos occurs; anorexia and constipation are present; on the skin purplish mottlings appear, and these do not fade upon pressure; the skin is so sensitive that the patient cries when touched; the reflexes, as a rule, are exaggerated; respiration is irregular, jerky, simulating the Cheyne-Stokes type; Kernig's sign is present in 90 percent of the cases—indeed, the occurrence of this latter symptom confirms the diagnosis when otherwise the symptoms are obscure and suggest a latent meningitis, and this may be the only symptom present.

Invariably lumbar puncture should be done, not alone for diagnostic purposes, but for therapeutic as well. If serum is used—and it should be—from 15 Cc. in infants to 25 to 70 in adults of spinal fluid is to be withdrawn; the blood pressure serving as a guide to the amount. Then (in the case of adults), from 20 to 25 Cc. of the serum, previously warmed to body-temperature (but not over, as it might then coagulate), is injected very *slowly*. Thereupon the blood pressure promptly falls about 20 or 30 mm.; and when reduced 20 mm., the injection of more serum is undesirable.

The serum, we repeat, must be injected slowly, occupying not less than ten minutes (better fifteen to twenty). The lower the blood pressure, the longer should be the time of injection. Three or four injections of serum, of 30 Cc. each, may be given within twenty-four hours. In infants, four or more

doses, of 15 Cc. each, every twelve hours are recommended. After each injection marked improvement usually is observed, this continuing until the time for the next dose.

The prognosis in tuberculous meningitis is decidedly unfavorable. Many authorities state that they do not know of a single instance of final recovery of the patient.

In cerebrospinal meningitis, the prognosis likewise is bad. When of the epidemic type, the attack may be prolonged for weeks or even months. If in the end the child lives, some form of paralysis, blindness or deafness is liable to remain as a consequence. In cases of the sporadic type, death, as a rule, occurs inside of three or four days.

Whatever the type, the withdrawal of from 15 to 25 Cc. of cerebrospinal fluid promptly will relieve intracranial pressure. Also, leeches may be applied behind the ears, over the mastoid process or the nasal wings. Besides, an ice-bag or ice-coil should be kept continuously in contact with the head, the latter being shaved. Inunctions of unguentum Crédé (or, better, intravenous injections of colloidal silver) are decidedly useful.

We need not point out the necessity for maintaining therapeutic cleanliness of the intestine. As initiative treatment, thereafter, and every third day, blue mass and soda, 1-2 grain, and podophyllin, 1-6 grain, should be given every fifteen minutes until six doses have been taken, this an hour later, to be followed by a laxative-saline draught. If, for any reason, the saline is rejected, then give castor-oil. Gelseminine may be pushed in frequent small doses, and nuclein be administered hypodermically twice daily.

Solid foods must not be permitted. Peptonized milk, clam-broth, properly prepared buttermilk, milk with galactenzyme, and similar foods, are permissible. In the more desperate cases, after the intestine has been thoroughly emptied, rectal alimentation is desirable. You will find H-M-C modified, No. 2, if very *cautiously* administered, of material value in relieving spasm, delirium, and other neuric states. If the bromides are used at all, the sodium salt should be selected. It is best administered per rectum.

A warm sulphur bath (at 100 to 105° F.) may be given twice daily, the duration of each bath being at least fifteen minutes.

In cerebrospinal meningitis, water should be taken in freely, by the patient; but, in place of drinking, which causes vomiting, we favor decinormal saline flushings of the colon, part of which is retained and absorbed.

As we have already stated, the diagnosis in the case under consideration is difficult. Blood, cerebrospinal fluid, and urine should be forwarded, at the earliest possible moment, to our pathologist, for examination.

Send in specimens, doctor; also, give us a clear clinical picture and some information about the prior conditions of the patient's health. State mode of onset. Examine the spine carefully. Test the reflexes. If at all possible, an ophthalmoscopic examination should be made.

QUERY 6031.—"Trachoma." J. M. W., Ohio, is treating a lady, fifty-six years old, blond, for trachoma. The granulations are fine, almost like "pin-points" (like those Ashhurst describes in his works), in each corner, but in the middle portion of the lid is a patch of granulations as large as a pin-head. Treatment adopted: zinc sulphate and lead acetate, with atropine and cocaine, to relieve congestion and pain. Our correspondent states that he cannot subdue the granulations, and asks us to suggest the most effective remedy.

We regret to say that we cannot suggest any effective "remedy" for trachoma. In the first place, it is necessary to distinguish between the "sago-grain," or true, trachoma, and the follicular, or false granulation, kind.

In follicular conjunctivitis, you have to do with oval or rounded (usually discrete) transparent bodies, the diameter of which seldom exceeds a millimeter. They often are of a faint-yellowish hue, arranged in rows and always larger in the inferior fornix. There is no change in the structure of the conjunctiva. Hypertrophy of the upper lid is trivial. The tarsus is not implicated, and the growths disappear spontaneously without the formation of scar-tissue. There rarely is drooping of the upper lid. Pannus and corneal ulcers are absent. The condition is not contagious.

In true, granular, trachoma, we find round opaque bodies of grayish-white color, extremely friable, deeply imbedded in the conjunctiva. Their diameter may exceed 2 millimeters. They tend to become confluent, and are always larger and more numerous on the upper fornix.

Structural changes are present in the conjunctiva, with papillary hypertrophy of the upper lid and involvement of the tarsus. The upper lid droops in most, and pannus and corneal ulcers occur in at least twenty-five percent of all the cases. The condition is contagious. It may occur at any age.

The treatment of trachoma is prophylactic, medical, and surgical. Under medical treatment, improvement often is but slowly obtained, or is ineffective. Various surgical methods have been advocated. The least objectionable undoubtedly is expression with the roller, or Knapp's forceps.

If only one or two follicles be present, they can be picked up with the fine dissecting forceps and expressed; or, when situated on the tarsus, be enucleated with a spud. A little orthoform rubbed over the palpebral conjunctiva relieves the subsequent pain. A solid stick of copper sulphate frequently is used, this being applied daily in severe cases. Pain, if severe, may be alleviated by rubbing cocaine in first, or by adding orthoform to the copper stick, and bathing directly afterward with iced water.

Silver nitrate stains the conjunctiva, and, therefore, is rarely used. It is mostly applied where there is a copious discharge. Corrosive sublimate, 1 part in 30 parts of glycerin and water, applied with a wool mop, has been found useful after expression.

Jequirity or jequirol (the active toxin of abrus precatorius) has been recommended. It is a dangerous remedy; rarely used. Exposures to the x-ray, for five minutes, three times a week, has proven remarkably beneficial. The treatment is painless, and it may be alternated with the use of the copper-sulphate stick.

Cures have also been reported from the use of radium and the high-frequency current. Carbon-dioxide snow has been lauded.

You may be aware that a 1- or 2-percent solution of iodine in liquid petrolatum has been employed by Russian oculists; mostly in chronic cases, with little secretion; an oily suspension of thymol iodide, we think, will prove quite as satisfactory.

One or two correspondents have reported excellent results from the application of a suspension of galactenzyme, but we are inclined to think that "trachoma" in one part of the country may differ naturally from the type observed in some other, distant, place. Treatment should vary accordingly. Some southern practicians use a 3- to 10-percent ointment of citrate of copper in white vaseline. Wright, of Mobile, asserts that this produces rapid absorption of the granulations, is entirely nonirritant, and can be used by the patient himself.

As the case improves, the periods between applications can be lengthened, and patient use at home a collyrium of zinc sulphocarbolate and boric acid. Some oculists recommend a 5- to 10-percent dilution of ichthyol.

QUERY 6032.—"Powder Stains in the Eye." C. A. C., Texas, has a patient who was struck in the eye with a Roman candle, and he wants to know how he can remove the persisting powder stains.

Powder marks in the skin may often be removed by pricking into the cuticle pure peroxide of hydrogen. Small granules of powder may be taken out with a dermal punch or a sharp-pointed knife. Also, a needle attached to the negative pole of a battery with a current of from 2 to 10 milliamperes may be inserted at various points about the periphery of the stained area until reaction is marked enough to insure destruction of the involved tissue; the dry eschar falls off in a few days, and then the process may be repeated over the adjacent skin.

Of course, none of these methods are applicable when the eye-ball is involved. Instead, most of the powder may readily be removed from the sclera (under cocaine anesthesia) by a competent oculist.

Diffuse staining is a more difficult matter, and, as we do not feel competent to give advice in the premises, we requested Doctor Burkholder to outline his method of procedure. This is the Doctor's statement:

"All superficial grains of powder should, of course, be removed from the conjunctiva and cornea. All authorities discourage deep dissecting in the cornea or sclera to remove powder-grains; better leave them alone.

"As to removing or disguising the stains of powder, a great deal can be said for and against. If the stains are directly in the pupilary area, nothing ought to be attempted for a considerable length of time after the injury, trusting that nature will be generous, as she usually is. Any effort at removing stains surgically from the pupilary area generally makes matters worse, so far as the vision is concerned; but, from a cosmetic standpoint, some improvement may be promised. Tattooing or pricking the cornea, however, may easily be followed by disastrous results, due to inflammatory involvement of the iris or ciliary body, or both, and no surgeon ought to undertake treatment of this character without fully acquainting the patient with the risk to be assumed.

"Repeated slight traumas of the cornea, such as tattooing, always set up local irritation, which invariably leads to corneal opacities, and these obstruct vision.

"A more detailed description of the condition would put one in the position to be more precise as to treatment, and possibly more hopeful as to prognosis."

QUERY 6033.—"Deep-Sea Plasma." F. H. S., Massachusetts, asks us what we think of the therapeutic value of deep-sea plasma. Personally, we have had no experience whatever with that material, but an interesting paper on this subject, by Le Boutillier, can be found in *The Journal of the American Medical Association* for January 1, 1910.

It was Quinton who first introduced, some ten years ago, the socalled deep-sea plasma as a remedial agent; since then, however, a number of French investigators have found that, by proper dilution of it, a solution is obtained which is isotonic with blood-plasma and that when kept at blood temperature the leukocytes will continue their ameboid movements in it. This solution contains the mineral salts necessary to the growth and development of the cells of the body and these are present in almost the same relative proportions as obtaining in the blood-plasma.

Le Boutillier has stated that this factitious blood-plasma, according to Robert-Simon, is prepared by diluting 83 parts of sea-water with 190 parts of pure spring-water; and this then is filtered, cold, through a germ-proof Berkefeld filter and preserved in sterile bottles. A number of French firms are putting this product up in sealed glass half-liter tubes.

In the case of infants and children, Le Boutillier injects from 10 to 60 Cc., the ordinary dose being from 15 to 30. The treatment extends over a period of from two or three weeks to as long as four to six months. His experience is that in some infants the condition has improved so much after only four or six injections that they were discharged, while in others the treatment had to be continued for four or five months. Quoting the same author:

"This treatment seems to be of most value in cases in which nutrition is at fault; in other words, in cases of inanition, malnutrition, marasmus, and chronic indigestion. During the past six months, the writer has made a study of this class of cases and, with a few exceptions, the results have been exceedingly gratifying."

In the discussion following the reading of this paper, Dr. Geo. Scott, of New York, said that he has obtained very good results from this therapy, however, being still in the experimental stage, it should be used only as an adjuvant.

The Practitioner (1911, p. 604) mentions sea-water-plasma as being put up by Oppenheimer, Son & Co., Ltd., of London, E. C. They collect the water from the deep parts of the North Sea, while the ship is stationary, about 200 miles from the shore. The water is treated and filtered according to the directions of Robert-Simon, and put in "aseptules" (ampules) holding 30, 50, and 100 Cc. It is also supplied undiluted in sterilized bottles of 8 ounces.

You may have seen the article by Park in *The Medical Council* for July, in which reference was made to his experience with deep-sea-plasma. His first experience, he tells us, was so gratifying that he was led to resort to the sea-water very extensively and in a great variety of cases, and now after two years' trial he "feels constrained to raise his voice in praise of what to his [my] mind is one of the greatest medical discoveries of the century." He feels certain that wherever the patient's vitality is lowered sea-water treatment is indicated.

Park has derived the greatest benefit in surgical cases in which the subjects had a low vitality, in eczema, psoriasis, gastrointestinal derangement, neurasthenia, and in convalescence from the severe acute diseases (pneumonia), simple anemia, after-treatment, in one case of true pernicious anemia, and the like.

On the other hand, Merrick, in *The Archives of Pediatrics*, 1910, declares, that it cannot be claimed that the subcutaneous use of sea-water has in general any remarkable effects, or any effects that cannot be obtained from normal salt solution. He quotes White, of Boston, who reports rather unfavorably upon its use in skin diseases, and several European clinicians who failed to get the results claimed by Simon.

The foregoing extracts may, possibly, enable you to form some sort of a tentative opinion. We are not prepared to say that the use of deep-sea-plasma is superior to the use of an isotonic physiologic salt solution. Please, note that we do not say "normal" salt solution, but "physiologic"; that is, a solution in which all the different mineral salts are contained in the proportion in which they are normally present in the blood-serum. We doubt whether the other constituents of sea-water are present in sufficient amounts to do any good; unless, indeed, we have to do with the ions in the latter.

One or two firms now prepare and furnish this deep-sea-plasma; however, it is not at the present time employed very extensively.

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Profiting by Mistakes

OF COURSE, mistakes are made. To err is human, and the medical man is just as human as any other division of the species. All the commencement-day orations and mutual admiration clap-trap to the contrary notwithstanding, the doctor is characterized by precisely the same frailties of character and of conduct that belong to every human being and to every department of human work. Hence, it goes without saying that he often makes mistakes. That is an axiom, a self-evident proposition, and does not need to be demonstrated.

It is equally beyond question that mistakes are almost, if not quite, as valuable factors in the education of mankind as are successes. Indeed, the achievements of mankind have the double value of intrinsic usefulness and of being the right thing; but mistakes can have no value at all unless they be turned to the advantage of warning and education for the future. Consequently, it is peculiarly the function of an error to be profited by in this manner.

To read the contributions of the great majority of our present-day writers in medical literature—not all of them; for there are, of course, a few great men who know better—one would imagine that they were infallible in their diagnoses and treatment and in their interpretation of things generally. And the fact is, many an unsophisticated student does gather something of this idea, and later is proportionately discouraged at his own imperfections. Of course, the more charitable construction to put upon the situation is that these writers and teachers regard their mistakes as having no place in the education of those for whom they write or talk. But, such a view is in itself an indication that they do not adequately grasp the nature and *modus operandi* of the educational process.

Every individual worker realizes how much he learns from his mistakes, even from the most practical and commonplace standpoint. Every man with a grain of philosophy in him realizes, further, that mistakes are an inherent part of progress, which consists in a trial-and-error process, so that without mistakes there could not possibly, in the existing state of the universe, be any progress at all. Upon both these grounds, there should be a greater disposition evinced by educators and writers to utilize their own personal errors for the education and profit of those whom they address.

To be sure, the thing can be carried to excess; and, like every good thing carried to excess, it would then run to seed. Nobody cares to hear about all the thousand and one

detailed blunders made by any individual, great or little, in the daily pursuit of his calling, just as no rightly constituted person cares to be regaled with a detailed account of the former evildoing of a converted sinner. One does not care for unimportant detail, right or wrong. That savors of egotism on the part of the relator, and wearies the listener. But, the essence of an error and its correction (a fundamentally wrong attitude toward some important truth of science and its outworking into a right attitude), these are useful agencies of education and inspiration in medical science, as in religion.

No disgrace is involved in making mistakes. Certainly, there is no surrender of dignity implied in admitting them and making proper use of them. No considerations of false pride should restrain the contributor to medical literature and medical education from declaring the whole truth about his personal experiences, even though it includes (as it undoubtedly will) the exposure of grave mistakes. If, as we are frequently hearing nowadays, there is need of more genuine frankness as between physician and patient, there is equal need of more genuine frankness as between members of the profession themselves in their presentation and discussion of medical subjects.

Nobody in the profession is expected to know everything or to be infallible. Only prigs are judged by that standard. In science, there is no place for such sentiment. The calm, dispassionate recounting of an error, how it came to be made, and how it was discovered and remedied, is often of infinitely more educational value than the glib recital of a series of apparently faultless achievements.

The best thing for today may not be the real best, as the best for self may not be the best for others, and if it is not the best in the long run, it is not the best at all.
—David Starr Jordan.

THE FIGHT AGAINST VICE

When one pauses for a moment in the conflict and takes an inventory of past and present conditions, he cannot help but realize, if he be a fair and thoughtful observer, that really tremendous strides have been made in the crusade against the sexual evil, especially in our big cities, where of course it has its biggest strongholds.

Much yet remains to be done, to be sure. The victory is not, by any means, won; nay, many of the problems have not yet even been solved, which stand between us and the way that leads to victory. Nevertheless, war has been formally declared and the forces of reform have been actually mobilized, and several actions have already been fought, while the powers of evil have steadily been pressed backward and put more and more on the defensive. Indeed, it is hardly too much to say that already we have organized vice on the run.

As with many other difficult situations, so with this vice-problem, it is coming about that in the face of determined action several of the apparently unsolvable difficulties solve themselves. The lions in the way become most docile, yielding creatures as Christian boldly approaches them with his drawn sword. Indeed, most of them are mere bogeys, set up by the forces of vice themselves, to frighten away disturbers. This is clearly and reassuringly shown by the report recently issued by the Committee of Fifteen, of Chicago, for the year ending April 30,

One of these specters was the traditional fear, industriously circulated by those whose interest it served, that the breaking up of vice segregation would drive prostitutes into respectable neighborhoods. As the committee properly points out, this is not true to anything like the extent that is generally believed; and, even though true that some professional prostitutes have taken up their abode in residence districts, the respectable and well-to-do neighborhoods are far better equipped to resist and prevent the inroads of vice than are the poor and submerged quarters that long have been victimized by entrenched systems of vice, police-protected and officially maintained.

Another persistent rumor set afloat by the vice-interests is that assaults upon decent women would increase, and have increased, upon the dissolution of the socalled red-light district of Chicago. This rumor the Committee of Fifteen is in a position absolutely to deny and disprove by indisputable statistics; for, the records of the city of Chicago show that in the year 1913—the year following the attack by States-Attorney Wayman upon the segregated district—the actual number of such assaults fell off nearly thirteen percent, while there was an increase in the city's population of more than 70,000.

Over against both these groundless fears, there stands the undeniable and palpable truth, emphasized by the Committee of Fifteen, that "no such villainous system of prostitution can be practiced in any residential district as was in vogue in the red-light

district, where from ten to one hundred women were plying their horrible trade under one roof."

It is interesting and significant to note the foremost fact to which the Committee attributes its epoch-making achievements during the past year. Says this report: "The Committee of Fifteen has dealt such a crippling blow to prostitution as a business enterprise that the vice-interests have come to fear the Committee more than they do any other force in Chicago."

There, we believe, is the key to the whole vice situation, in all of its aspects, past, present, and future. That, more than anything else, is the reason girls go wrong—because someone (not the girls themselves) has a money interest in their going wrong.

The precise ramifications of this organized system of commercial profiitng out of traffic in girls have yet to be traced; and they are being traced, through strange and complicated windings. But the discovery that the great sexual evil *is* a systematized business enterprise is the most important development; and the attack upon the evil in its commercial phases is the greatest coup that the forces of reform have ever achieved. This angle of attack offers colossal difficulties, it is true; but it is the *right* method and will ultimately succeed.

If you would be heard at all, my lad,
Keep a laugh in your heart and throat;
For those who are deaf to accents sad
Are alert to the cheerful note.
Keep hold to the cord of laughter's bell,
Keep aloof from the moans that mar;
The sounds of a sigh don't carry well.
But the lilt of a laugh rings far.

—Strickland W. Gillilan.

SNAKE BITES AND THEIR TREATMENT

The Charlotte Medical Journal for August contains some interesting data upon snake bites and their treatment. Much of the work done in other countries on the venoms is inapplicable here, because our venomous serpents differ from those of other quarters of the globe, in the nature and effects of their toxic secretions. Two principles, however, have been isolated, and most of the toxic properties of the venoms of all serpents depend on one or the other of these, or on their mixture.

In American snakes these two toxins are found, the one being a hemolysin, the other, a vasorelaxant. The former causes dissolution of the red blood-corpuscles, the latter paralyzes especially the coats of the great splanchnic veins. The leading symptom produced by the first is dyspnea, by the latter, syncope. The varying degree of these presenting themselves in any case indicates the relative proportions of the two principles in the venom.

Neither of these bodies is very enduring in its action, and the problem in cases of snake bites is, to keep the patient alive for a few hours, long enough for the effects to pass off. Any effects remaining after the lapse of twenty-four hours may be attributed to some one of the other principles as yet not specifically studied. But, since all act chemically, and not through the agency of any self-propagating microorganism, the action can not be very enduring.

The writer quoted mentions the inhalation of oxygen as a possible remedy for the hemolysis; but he thinks it unlikely that it could be secured for application in localities where snake bites are likely to occur. We do not see why this should be. In some parts of the country where rattlers abound there are hunting-clubs, and these might well be equipped with oxygen-tanks. Physicians practicing in these places might find this remedy useful in other conditions and worth keeping on hand. No mention is made of arsenic as an antihemolysin, yet, its properties seem to be quite decided in this respect. The arsenate of strychnine comes near the ideal antidote, combining, as it does, remedies for both toxins.

For the vasorelaxant, the writer advocates glonoin, quickly to flush the anemic brain with blood and arouse the activity of the benumbed cerebral centers; atropine, to increase and prolong this action; and strychnine, to enhance the reaction of the system with these, to "take up the slack," and to oppose directly the relaxant action of the venom. Each should be given to the production of full systemic effects.

Alcohol is condemned, as directly increasing the tendency to relaxation of the splanchnic vessels; but it opposes fear—and men die from fear. Far better than this potent and perilous remedy should be the hyoscine-morphine combination, which so speedily removes the sense of apprehension that usually follows accidents and interferes with the surgeon's duties. We do not suggest this as a remedy for snake bites, but rather as a means of restoring tranquility, when that is necessary to save life.

Something might have been added as to the maintenance of the body-heat, the sustenance of strength by hypodermoclysis of

saline solution, the necessity for rest, in order to avoid wasting the little remaining strength, and the local application of potassium permanganate. However, the article in itself contains many useful hints and information the general public and even the profession might read with profit. We imagine that in the Carolinas, where rattlesnakes are not unknown, it may be put into practical trial, and we shall watch with interest for any reports from the field on the results.

I like to think of medicine in our day as an ever-broadening and deepening river, fed by the limpid streams of pure science. The river at its borders has its eddies and currents, expressive of certain doubts and errors that fringe all progress; but it makes continuous advances on the way to the ocean of its destiny. Very gradual has been the progress of its widening and deepening, for it is a product of human ingenuity and artifice, and only skilled engineers could direct the isolated currents of science into the somewhat sluggish stream of medical utility.—Herter.

SEEING YELLOW

Under the above title *The Medical World* contributes a brief editorial on the disposition of certain special students of psychopathia sexualis to see abnormality everywhere. The article to which exception is taken is Victor Mercante's study of life in a convent school. This observer rather absurdly concluded that, since the decorum of the school was irreproachable, there must be something wrong going on under the surface. He objected that the girls went about in pairs, of which one member was a stronger and more decided character than the other!

The World says: "For the love of Mike! What do they expect of the poor girls, anyhow? Start with the determination of seeing abnormality, and nothing escapes. Let the girl go with male companions—aha! With another girl—homosexuality. Alone—there is but one explanation of that! Then, what is she to do? * * * * As a rule, with few exceptions, our girls are clean, wholesome, innocent, free from all knowledge of evil other than the instincts natural to the young animal. The conditions apparent to men like Mercante exist only in the jaundiced mind of the observer."

To which we say a hearty Amen. Men who see evil in everybody and everything are looking through their own soul-mirrors. Those who assert the existence of graft in every public official proclaim themselves as ready to be grafters; those who find wickedness universal are excusing themselves.

Apart from this, there is a general tendency to put on special spectacles. As the ophthalmologist finds every human being subject to difficulties of accommodation, the aurist sees defective ears as the cause of all maladies, the student of tuberculosis has everybody swarming with the bacilli of Koch, and the "cardiologist" fails ever to detect a perfect cardiac rhythm. So the student of ancient religious beliefs and practices sees phallic emblems in every church spire and pillar, yonis in the horseshoe over the door, in the Byzantine window-frame, the priest's stole, the arabesque decorations. Scarcely is there an ornament that can not be tortured into a resemblance to one or the other.

Tolstoi saw in woman's dress and ornament, her graces and accomplishments, her song and her wit nothing but one universal and continual invitation to amours. The grand design of Him who made woman as a helpmate to man was completely forgotten. The charm, the ennobling influence of social intercourse with pure, intelligent women were lost on the rude mujik.

Are there, in truth, two sides to every shield? Then let us look only on the golden one. Good and bad everywhere? We'll take the good then, and leave the bad for whom it suits. We'll pick out the streak of good in every man and woman, and ignore the evil or condone it—surely, were we in the other's place we should not have done as well. So, we may go happily along the world, loved and welcomed; for everybody likes to have the good in him recognized, and to be as good as we see or think him—or her.

A GREAT WORK FOR GENERAL GORGAS

Now, that the Panama Canal has been completed, our journals are beginning to propose new tasks for the great administrators who have carried that enterprise through to success. General Goethals may be sent to Alaska to build the Government railroads that are to develop that immense territory. There is an undertaking which seems big enough for any man. *The Southern Medical Journal* now proposes an equally imposing task for General Gorgas. Our colleague is anxious for a unification of the sanitary services of our Army, Navy, and Public-Health Service into a great department of health, with Gorgas at its head.

We have health-problems in our country worthy of the efforts of any man. For instance, we are told that every year several million people in the United States have

malaria, and that the annual economic loss from this disease is not less than $100,000,000. Gorgas showed that malaria could be eliminated in Havana and in the Panama Canal zone, and is undoubtedly the man to undertake ridding our country of this disease. Also, could there be a better man to grapple with the problems of tuberculosis, cancer, and with the increasing burden of kidney and heart disease, which, it is held, are largely preventable?

We are glad to lend the weight of our endorsement to the plan proposed by our souther confrère. Not only is Gorgas a great sanitarian, but he is also a great administrator, and therefore just the man for us to place at the head of this movement.

War in men's eyes shall be
A monster of iniquity
In the good time coming.
Nations shall not quarrel then,
To prove which is the stronger;
Nor slaughter men for glory's sake;—
Wait a little longer.

—Charles Mackay.

PULMONARY HEMORRHAGE

This very important subject of hemorrhage of the lung is discussed, in the August issue of *The California State Journal of Medicine*, by R. S. Cummins. In this paper, three essentials are taken into consideration: the condition of the ruptured vessel, the blood-making clot, and the vascular pressure. Rasmussen concluded that the hemorrhage nearly always came from the pulmonary arteries and from small aneurisms. Slight hemoptysis may be from the capillaries. Ordinarily the blood condition is not a factor in inducing or prolonging the hemorrhage.

Wright found that by means of calcium salts he could decrease the time required for clot formation to one-half or even one-fourth. He gave a single dose of 60 grains of the calcium lactate or chloride, which took effect in twenty minutes, reached the maximum effect in forty-five minutes, and would endure for from four to seventeen days.

Absolute rest in bed is of use in so far as it reduces vascular pressure. Food and drink are to be held to the lowest possible point; mild laxative salines should be given to abstract serum; also to eliminate any pressor toxins that may be absorbed from the bowel. Codeine, 1-2 grain every hour, to relieve cough.

Wiggers "splendid" work on drugs designed to reduce blood pressure was mainly done with drugs that could not do it—digitalis, strophanthin, ergotoxin, pituitary extract, nitrites, and chloroform. Digitalis increased systemic and pulmonary pressure, whether with or without pulmonary hemorrhage. Strophanthin and ergotoxin did the same, without hemorrhage, but did not alter the pressure during pulmonary hemorrhages. Chloroform lessened systemic and pulmonary pressure and slowed respiration; so, Fish was correct in his observation of its usefulness in these conditions. The nitrites lowered systemic pressure with and without bleeding, but increased pulmonary pressure, except late in hemorrhages. The general belief in their efficacy, therefore, probably is incorrect. Pituitary extract raised systemic pressure and lowered pulmonary, both in normal and in bleeding animals. It should be effective, and some favorable observations have been reported.

Here is where our author makes his most glaring mistake—"Atropine has been suggested because of its depressing effect upon the vasomotor system and the relief it gives to the coughing." But, atropine does not depress the vasomotor system; instead, it powerfully stimulates one certain portion of it. To speak of "depressing" this system, is, however, about as specific as that famous analysis a certain chemist once made of a mouse.

There are to be considered the vasoconstrictors and the vasodilators, each of which may be stimulated or sedated. Atropine stimulates the vasodilators, and by so doing increases capillary attraction and impounds the blood in the capillaries. We have repeatedly asked in many medical journals for reports of any case in which atropine failed to arrest any species of hemorrhage, and have as yet had no case reported except where there was not sufficient time for the action of the drug to develop. Give enough atropine to dilate the cutaneous capillaries, and the bleeding must cease, for the reason that the blood is held in the capillaries. As these have a capacity for about 700 times more blood than has the entire arterial system, it is easy to realize that a very slight increase in capillary attraction must materially decrease the quantity of fluid in the latter vessels.

To return to our author. Adrenalin, he argues, must be injurious, as its constrictive action on the vessels must increase blood pressure. We question this conclusion; for, if the constriction should suffice to close completely the arterioles, it must stop

hemorrhage from them. This applies also to digitoxin and to ergot when given in maximum doses. If the latter can shut off the circulation so as to occasion gangrene from loss of blood supply, it should stop arteriole hemorrhages as well. The experiments are not described, but must have been made with smaller doses.

Dr. Cummins here adds a bit of information, for which we should be grateful had he elucidated. Aconite undoubtedly lowers pulmonary pressure, but "the liability of a hemorrhage patient to pneumonia and the frequency of some cardiac disease would certainly limit its usefulness." If any reader will furnish the key to this cipher we shall be duly grateful.

The conclusions point to rest, calcium, and pituitary extract as the remedies. Emetine is not mentioned, although the medical journals of the world are ringing with its raises. It is evident that the author has failed to canvass the available sources of modern data on the subject, or he could hardly have missed mention of this powerful hemostat in the treatment of pulmonary hemorrhage.

The idler, the lounger, the loafer—who respects him? He isn't decent company even for himself. The world has no use for him. He is marketable only to the devil, and the Evil One makes him work long hours and overtime, and at that, according to the Bible, the wages are death.—J. M. Studebaker.

ALCOHOL AND TOBACCO VERSUS LONGEVITY

The venerable superintendent of Walnut Lodge, after a lifetime spent in fighting the curse of alcohol, contributes a notable article to *The New York Medical Journal* upon the effects of alcohol and tobacco on life expectancy.

Doctor Crothers calls attention to the curious divergences of opinion among life-insurance men in regard to the effects of alcohol. Some few insist on total abstinence for first-class risks, others allow a moderate use of beer, wine or even liquors, while a few declare that moderate drinkers are better risks than total abstainers. Evidently the actuaries have not sufficiently studied the problem to arrive at a definite conclusion. The bias powerfully favors the acceptance of risks—the solicitor gets his commissions and the policy-holder pays the losses. The greater the volume of business, the wider these are distributed. So long as the mortality does not exceed the average, why should they let good business that nearly every other company accepts go to swell the figures of rivals?

About thirty years ago the president of one life-insurance company made some interesting observations on a number of young men who were accustomed to the daily but moderate use of beer. They were the "pictures of health," bright eyes, rosy cheeks, full habit of body; just the men who, if taken ill, should be expected to pull through on their general robustness. Their history was startling—each was seized with some slight ailment—an attack of typhoid fever, a touch of pneumonia, and just when the critical time came the man died of heart failure.

Just when we came upon that item we had a most distressing case that exactly paralleled it. A brilliant young lecturer, one from whom we looked for honor to the school with which he was connected, failed and died of typhoid fever, despite the efforts of the best clinicians in the city. He was never intoxicated in his life, but never went a day without from three to six glasses of beer—never more.

Revenons à Doctor Crothers: The impetus to study alcohol and its effects has come to the scientists largely from the laity. Apparently exaggerated assertions have led to investigation, with the result that very much of the lay indictment has been sustained. Richardson, Horsley, Woodhead, Kraepelin, Mendel, Kassowitz, Magnan, Marvin, Berkley, Davis, Hall, Hodge, Patterson, Kellogg are mentioned as having published books or papers condemning all use of alcohol as a beverage. Doctor Crothers' own studies have been carried on for forty years.

The fascination of alcohol is due to its narcotic action, covering up fatigue and pain, assauging worry and drowning trouble. Does it ever remove trouble? or disease? remove the causes of either? Does it ever fail to induce its own peculiar changes in metabolism—dehydration, corrosion, fatty degeneration, connective hyperplasia, paralyses, toxemias, gout, nephritis, hepatitis, the catalog innumerable of consequences, physical, psychic, sociologic?

Clinically, Crothers deals with two classes, the alcoholics and the inebriates. The former is a victim of a bad habit, the latter is a neuropath. They should be studied separately.

A prominent life-insurance man made a study of statistics with the view to combating the wild statements of the temperance fanatics. He concluded that in this country alone

from 60,000 to 70,000 persons died annually from the effects of alcohol, and offered this as a minimum. Of those dying of pneumonia in two large cities, over 65 percent were alcoholics. More than half of those dying of cerebral hemorrhage used alcohol. Heart failure, nephritis, fatalities from shock and accidents, tuberculosis, insanity, idiocy, pauperism, crime, and other great degeneracies are inseparably intertwined with alcoholism.

The effects of tobacco have also been studied; but less extensively, as its evils are less manifest and decided. But tobacco also is a narcotic, a relaxant, a paralyzer. Its action differs in degree but not in kind from those of alcohol, opium, and other narcotics. It brings nepenthe to the anxious, but does not remove the causes of worry. It relaxes mental as well as vascular tension, and enables the overburdened to think calmly and concentratedly. Nicotine, the principal alkaloid, is peculiar, in that its continued administration does not produce tolerance as does that of morphine. Notwithstanding the known tolerance of the stomach against tobacco, nicotine, the lethal dose of the alkaloid remains fixed for the animal despite its continued administration.

Heart disease and sudden failure, sclerosis, atrophy, impairment of development when tobacco is used by the young are the objections to this habit that are registered by the laboratory and confirmed by the clinician. Crothers concludes: "It can be stated with absolute certainty that the physiological and pathological effects of tobacco complicate and increase mortality, and its influence on the entire organism is that of a profound concealed poison lowering cell activity and brain control."

The man who succeeds above his fellows is the man who early in life clearly discerns his object and toward that object habitually directs his powers. Even genius itself is but fine observation strengthened by fixity of purpose.—Lord Lytton.

DYSENTERY A SURGICAL DISEASE

Dr. F. R. Kenton, in *The Charlotte Medical Journal* for August, discussing amebic dysentery, used this language: "I have failed to see a well-developed case cured otherwise [than surgically], even though all of the accepted remedies have been exhibited over periods of time ranging from weeks to months."

This cuts out emetine, which has not been before the medical world long enough to be classed as an "accepted remedy" or to be employed for the periods of time mentioned by Doctor Kenton. But, even as applied to the preemetine period, is his condemnation of nonsurgical treatment just and sustained by the facts?

The surgeon is not to be accepted as an authority on medical methods and remedies, and for two reasons: first, he does not know anything about them; and second, the cases that are brought to him are exclusively those in which the general practician has failed. Some pessimistic carpers might add that, as long as the surgeon sees a fat fee in his operative cases, while the family practician sees a fat dividend therefrom, without trouble or responsibility, neither is likely to have much faith in any other form of treatment. With this loathsome suggestion we take no part nor parcel. We do not believe that the medical profession, or any considerable percentage of it, is so lost to honor and their professional obligations. The argument urging to surgery as a duty to the patient is today strong enough, without the added incentive of pecuniary profit.

We return to our charge: the surgeon of today knows too little of medicine to be accepted as an authority thereon. He has been a general practician, away back in the days when calomel-and-jalap, quinine-and-acid, salts-and-senna, and opium-and-camphor comprised the materia medica. Of the modern arms of precision, the tremendously-powerful weapons of up to date therapeutics, he has not the glimmering of a conception. Yet, he thinks he knows it all! Every time a doctor brings him a patient for operation, acknowledging that he has "used every known means, and failed," the surgeon accepts the humiliating confession as the expected, and his own sense of superiority over the general ruck of the profession is confirmed.

Were he to wait until the real therapeutists acknowledged defeat, there would be very few surgical triumphs over the drug-men to be recorded.

The possibilities behind drug applications are without limit. We read in the newspapers of the "delicate" operations of the surgeon (they usually take place in the papers, if anywhere); but, who tells of the delicate applications of therapeutic principles to stimulate lagging functions or to moderate excited action, or to eliminate foreign elements that are disarranging the delicate adjustments of the bodily mechanism? We read about the brilliant work of the surgeon who deftly abstracts the thyroid gland or the kidney; but what of the patient, skilful doctor

who slowly coaxes the diseased organs back to healthy conditions and operation?

There is nothing in the whole realm of surgery that is worthy of comparison with the skill that conducts a typhoid-fever patient through the labyrinth of perils to the haven of recovery.

Before emetine was rediscovered by Rogers, we succeeded so nicely in amebic dysenteries that we never once were compelled to call in the surgeon. Clearing out the alimentary canal with calomel and saline laxatives, disinfecting with zinc sulphocarbolate, aiding, by the use of colonic flushes, with weak silver solutions, following with copper arsenite, we did very well, and won the complete satisfaction of our patients. We discovered that the colonic amebæ did not relish a diet of calx sulphurata; that the arsenates of iron, quinine and strychnine gave great benefits; and we folded away in our pocketbooks many a well-earned and gratefully paid bill therefor. Suggest surgery to the patient, and his only answer is a snort of derision.

But the great defect of drug treatment is, not its inefficacy, but the fact that it does not bring its devotee into the limelight; it is not a grand-stand play.

People—men and women—like to brave dangers. In the ballroom, point out the reigning Don Juan—and you can't keep the women from enjoying the delicious delights of conversing with such a terrible monster. Tell the boy it means danger to climb a certain tree, and he'll climb it the first unwatched moment. Cover the bulletin-boards with war news, sound the fife and the drum, and the youth drops hammer and spade, jumps the fence and is off.

Here stands the Man of Blood, the terrible Surgeon, the man to whom all go when other hope is fled, when other doctors have confessed their impotency; in whose hands lies the slender chance left, whose grim presence denotes a peril looming before you, as alluring as the precipice over which you feel the impulse to jump. On the other stands the Physician, who says that by the use of certain methods he hopes to influence the existing conditions, so as to win back to health in the course of time, safely, gently, by following the laws by which Dame Nature operates. Just familiar, everyday things; nothing exciting, nothing picturesque, only commonplaces; nothing appealing to the imagination.

Comes the Homeopathist with his infinitesimals, the Christian Scientist, the Chiropractor, the Osteopathist, the practicians of a thousand-and-one novel and fantastic methods; and all win a following; not because there is anything in their systems, but because people want something that appeals to their imaginations, that is "different"; that gives them the chance to feel superior and above the commonalty.

Moral—invest your work with mystery; look wise, say little and leave much to the imagination; keep your methods secret; let the impression prevail that you are the master of occult things, the repository of knowledge not patent to the vulgar herd; that in your hands lies the destiny of human beings, the control of human lives; the shears of Atropos are yours. The elixir of life, the restorer of youth, the philosophers' stone, the transmuter of metals, the lore of the alchemist, the dreams of the Pythagorean, the mysteries of Eleusis, all and more are at your command. What you might do if you chose is limitless.

A halo of the mysterious invests you, and a following is insured you!

Believe, and make the world believe, your jaw is set to win;
Believe (belief's contagious) that your ship is coming in;
Believe that every failure is brought about by lack of grit;
Believe that work's a pleasure if you buckle into it;
Believe there's help in hoping, if your hope is backed with will;
Believe the prospect's fairer from the summit of the hill;
Believe, with all your power, that you're sure of winning out;
Believe, keep on believing. they are brothers—Death and Doubt.

Strickland W. Gillilan.

MEDICAL INSPECTORS OF SCHOOLS

One of the finest opportunities as yet extended to the medical profession is presented by the appointment of physicians to inspect school-children, and investigate their accommodations and management. Here is a field in which neither traveling quack nor ebullient druggist can contest our rights. We have here a chance to let the light of modern science in upon school methods, and of harmonizing the teaching with the mental and physical condition of the pupils. May the school-physicians be ready and qualified to make the best use of their opportunities.

What of the backward children? Much teaching during a third of a century has enlightened the writer to the fact that there is a very great difference in the rate at which various youngsters can absorb and assimilate information. This is not more often a matter of varying capacity as it is of the habit of concentration. One man will limit his con-

sideration of a subject to his notes or text-books, while another will take in collateral matters that take his mind over a much wider range. My experience is that the men who pass the best examinations are rarely if ever, as good in after-life as those who do much worse in class and finals.

There is a wide difference in the capacity of young men as to the height they can climb in acquiring knowledge. Some are able to go any distance up the mount of mental development; others reach their limit at some point along the slope, and any attempt at further development is wasted. Heredity is a feature here: the son of a scholar, himself the child of educated parents, can take on a college course with less effort, and go further, than the descendant of generations of laboring men. Exceptions? Surely; but only exceptions.

A radical defect in our schools of all grades is that all pupils must go the same route and at the same gait, the quick and the dull, the superficial and the profound, the keen-witted son of culture and the child of clods.

The management of the backward: A boy who had failed to keep up with his classes during the regular term was sent to school during the summer to make up the deficiency. This was a mistake. If he could not keep up with the average of his mates, he surely needed his vacation rest more than did they. If the fault was inattention rather than a lack of capacity, his teachers exhibited incapacity as to him. A few pupils are relatively dense as regards certain studies; when their teachers fail to win their attention or to impart the knowledge, there is a lack on the teacher's part. If this is evident in only one or two pupils, they should be transferred to other instructors; if the lack is more general, the teacher should be replaced.

For many years the writer was able to hold the attention of every student in his classes. When he found himself unable to do this except by an expenditure of energy that at the end of the hour left him exhausted, he retired from the rostrum. Why are so many men unwilling to acknowledge the normal condition attending advancing years?

It is not safe to assume that teachers and school-directors are familiar with the elementary principles of sanitation. Many a worthy and devoted teacher has struggled through an hour of headache and inattentive classes, because it did not occur to her to throw open a window. A dead rat behind the sliding door in the fresh-air intake cost a certain family thirty-five dollars in doctor's fees before it was discovered. The water from the school-well is not necessarily pure because it is clear and tastes well.

As to the defects of eyes, ears, noses, chests, or the difficulty of learning lessons when an empty stomach is clamoring for food, are they not written in the annals of the medical school-inspectors?

Let me know what goes on in a doctor's office, and I will tell you if he is ethical. Let me know the business side of his practice, and I will tell you if he is honest. Let me see his diagnosis cards, and I will tell you if he is a sincere student of medical science. Let me see his treatment record, and I will tell you if he is a skilful practician. I care not what office he holds in the organized guild; I care not how much bluff and bluster he displays among his fellows; I care not what method he employs to teach the public his name and trade—I will then know the man.—Doctor Betterman.

PROGRESS OF THE HARRISON BILL

A month ago we expected that by this time the Harrison Antinarcotic Bill (H. R. 6282) would be a law. We regret being obliged to inform our readers that there has been an unfortunate delay and the bill still rests in the hands of the conference committee, the members of which are, Senators Thomas, McCumber, Smoot, Simmons, and Williams, and Representatives Moore, Kitchen, and Hull.

The delay in agreeing upon the final form of this Act is due mainly to differences of opinion with regard to the bearing of the regulations of the bill affecting the medical profession.

Strong influence has been brought to bear upon the conferees to induce them to substitute the language of the House bill, which required that the physician or veterinarian should "personally attend" every patient to whom the narcotics might be dispensed. The Senate bill provided that he should be especially "employed" to treat such patient. It is contended that the phrase, "personally attend," might be construed to require the physician to attend directly and in his own person upon every patient, and that, therefore, in cases of emergency his initiative would be seriously curtailed.

Another, more important, difference of opinion has arisen with regard to the so called "record provision." This was incorporated in the Senate bill, but was rejected before its passage. The druggists are insisting upon the restoration of this provision to the bill, and some of the conferees seem to be seriously contemplating putting it in again. We do not believe, however, that this is

likely to be accomplished. To require the physician to keep a record of every narcotic dose which he might dispense, no matter how small, would involve him in a maze of bookkeeping difficulties that would lead many an honest man into serious trouble with the Government.

We are confident that the conferees will, in their wisdom, see this point and refuse to be led astray by any form of special pleading. Probably some compromise will be agreed upon. At any rate, there is every probability that the bill will soon become a law. Of course the European war and contemplated trust legislation together have created serious complications that have tied up our lawmaking-machinery and may still further delay the passage of this Act.

We would suggest, however, that any physician who is acquainted with or can influence in any way the conferees should do his best in urging the passage of the bill as quickly as possible, and essentially in the form passed by the Senate. It is important that the medical profession should not be handicapped by unnecessary restrictions by demanding personal physical attendance in every instance, nor by the inclusion of the socalled "record provision."

The man who makes a promise which he does not intend to keep, and does not try to keep, should rightly be adjudged to have forfeited what should be every man's most precious possession—his honor.

—Exchange.

RECONCENTRATION IN MEDICAL PRACTICE

It is astonishing with what fatuity and misapplied perseverance so many medical graduates camp on the trail of a city practice, and on the ragged edge of it at that, in the fond hope of some day entering into the heritage of a large and influential position—a vain hope in almost every case where there is not a substantial basis of social or professional influence to start with. In the keen competition and the multitudinous interests of a large city there is but little opportunity of any kind for any except the hundredth man, and for him only if he be backed by exceptional combinations of circumstantial advantage.

And, even assuming that the man of self-contained resources may, by dint of patient and persevering struggle, attain more or less prominence and competency, professional and financial, in the large city it is a serious question whether the game be worth the candle. It is more than likely—indeed, the personal expressions of those who have accomplished it go to show—that by the time such a status has been attained the things which seemed to make it so desirable in one's young and callow days have lost much of their glamor, and other phases of life and work, in which the city is sadly wanting, have assumed vital and wistful proportions.

Even in the most practical features of medical work, the country offers, in our opinion, a far better field for the able and energetic physician who is dependent wholly upon his own resource and personality. Except for the few men who by fortuitous circumstance occupy the top ranks and pluck the sugar plums of the profession, the fees of the provincial town bear a much more favorable ratio to the expense of living than do those of a great city. The fact is, the fee in the provincial town is nowadays about the same as in a large city; and, while it is true that living expenses have, in many directions, followed the same tendency to equality, there are still many phases of expense in the provincial town that are far more economical than those of the city, and, in a general way, there is not the temptation to "strike the pace" in the one that there is in the other.

So far as the work itself is concerned, the provincial town and its tributary territory afford a much richer supply of actual clinical material to the practitioner than does the large city, except to those few city men who control the facilities of the larger charity clinics. The actual clinical and office-practice of the average provincial practitioner is, man for man, much more numerous and varied than that of his city brother. Especially is this true of specialists, for whom, contrary to the general impression, the provincial town is a far more promising and profitable field; provided, first, that he knows his business thoroughly, and, second, that he depends wholly upon his personal resources.

And, finally, in the fulness and satisfaction of the personal, social life, the career of the provincial practitioner is simply beyond comparison with that of the city man. The good-sized provincial town nowadays has all the social and educational advantages of the great city, while, happily, lacking in those dwarfing and stultifying and vulgarizing influences which obtain in the latter. In these smaller communities, there is room for each man's personality to expand and to tell for its own intrinsic value. Every man's soul is his own, and neither the thumbscrew of

economic competition nor the lash of social exactions makes a wornout slave of him before he is physically old.

The fact of the matter is, the socalled advantages of the large city for the medical practitioner are largely fictitious. In everything that makes the practice of medicine genuinely pleasant and permanently profitable, the provincial town offers opportunities and promise greatly in excess of the city. In compensation, as compared with expense; in actual clinical material and experience, which at the same time pays for itself; in the independence and personal reputation of a man's work; and in the higher development and expansion of manhood; the provincial town has the large city at so marked a disadvantage that we have yet to meet the doctor who has tried them both that can be persuaded at any price to accept again the city career.

Every citizen should be inspired with love of personal and public hygiene, as were the Greeks. Every physician should be deeply grounded in physiologic medicine and provided with proper facilities for using it practically. Every public health officer should know thoroughly the contributions of etiologic medicine. All efforts should be made to promote the most fundamental needs of society.—Bardeen.

NEED OF REFORM IN HOSPITALS

Some time ago, at a gathering of medical men, when the conversation turned upon hospitals, a brilliant young obstetrician of this city, who has a large and growing practice, both hospital and private, said to me that, barring one or two exceptionally well-equipped and well-conducted establishments, he would rather have his patients under his care in a reasonably appointed home than in any hospital in the city.

Naturally, this rather sweeping assertion astonished me, and I asked him for his reasons. They were very simple, and very tersely and forcefully given. He declared that the average hospital was a good deal of a delusion; that to have one's patients in it gave one a false sense of security which the actual state of the case did not warrant; that one naturally relied upon a hospital affording equipment and facilities and service which, as a matter of fact, it did not afford; and that in an emergency one was more likely to be left in the lurch than he would be in the patient's home, where the attending physician himself was sure to forestall such occasions.

I was disposed to think, at the time, that my friend was exaggerating a little; that possibly he was fresh from some disagreeable experience at some particular hospital, and, like David, he said in his haste, "All men are liars."

However, I kept all these things in my heart, and pondered on them. I kept my eyes and my ears open, likewise my mouth, for I made quiet inquiry here and there among both physicians and laymen who were in a position to know something about the matter; and I must confess that the result of my still investigation is, to persuade me that my friend the obstetrician was not talking in any hyperbolic terms, but spoke forth the words of truth and soberness.

I dislike very much to criticize an institution such as the hospital. That sentiment, however, is just one of the things that is wrong with the whole situation. As an institution, the hospital is surrounded with a halo of sanctity that seems to exempt every individual establishment from ordinary twentieth-century standards of efficiency, and to prevent everybody from venturing even a well-meant word of criticism or suggestion.

The truth is—one gathers it, not alone from his own observations, but from the irresistible consensus of other men's experience—the average hospital is a very mismanaged and maladministered affair. Just where the fault lies, we are not now enquiring. We may enquire into that later. For the present, we are concerned only with pointing out the deplorable fact—a fact which really needs no pointing out to those who have had anything to do with hospitals.

The service, from the patient's standpoint, is worse than a joke. Its culinary department is a thing to make angels weep; it often makes patients swear—and, incidentally, starve. It really seems that all that the hospital furnishes the patient for his twenty-five or thirty dollars a week is, a room to sleep in and meals that he would kick about in a four-dollar-a-week boarding-house.

The trouble is, of course, that the whole institution, so far as the service is concerned, is a training-school; the kitchen, a cooking-school, and everything is done by the cadets; the result to the patient being much the same as getting shaved in the clinic of a barber's college. The only reason why he goes there is, because his doctor tells him to, and the only reason he stays is, because he cannot get away. It would do no good to change, anyway, since all hospitals are about alike in this respect.

All this, however, annoying as it is, is of minor importance beside the unsatisfactory state of affairs from the physician's stand-

point—by which I mean the medical aspect of the patient's interests, which are in the physician's keeping. It is very largely as my obstetrical friend said.

The very points in which the hospital is presumed to be superior to the home are the points in which the average hospital is lacking. Take nursing, for example. Unless a patient engages a special nurse (which, of course, he could just as well do at his home), the nursing is a farce. The "advantages" he derives from the occasional grudging visits of the busy, often irritable, floor-nurse are purely fictitious.

Once, again, I am not pretending to say what or whose is the fault; I am simply stating a fact well known to every physician and patient who has ever had hospital experience.

Virtually every hospital, as presumably every doctor knows, is dominated by a clique; not infrequently by one man. This one man, or the members of the controlling clique, get all the service there is to be got, and the other physicians get what is left. I, myself, only a few weeks ago was denied the use of the operating-room in a certain Chicago hospital, for a good-paying patient, because at the hour I wanted it the boss surgeon of the place would be holding a clinic in the amphitheater and would demand all the available internes and surgical nurses. It was admitted that he did not *need* them all, but he required their presence.

I used to think that the stories told by patients of neglect and poor treatment in hospitals were the distorted fancies of sick minds and bodies; and, of course, some of them are. But, experience and observation have taught me that there is a great deal of substance in them. I could tell, and so could every other man who has placed his patients in the hospital, similar stories; only none of us wishes to make specific accusations against particular institutions or to give the impression that we regard hospitals as total and wholesale failures.

Once in a while some of us encounter, or hear of, serious results of carelessness and neglect. Fortunately, these are not frequent. Still, there is hardly a physician with hospital experience who has not had to stand, more than once, between his patient and the hospital as a protector of the one and an apologist for the other.

My own opinion is that hospitals need more publicity. They are altogether too close corporations. I do not mean that the lay public should break in and control them. The medical profession must, of course, be in control. What I do mean is, that in their service to the doctor and his patient they should be subjected to the same open standards of competitive efficiency that the modern physician himself is subject to.

This is a matter in which the whole medical profession is responsible to the public. There is a crying need for reform in hospital management and conduct; and it is the business of organized medicine to see to it that such reform is carried out.

Many doctors of high rank are constant financial bamboozlers. Every move is a grandstand play. Every case is a serious case. The call came in the nick of time. Death flew out the back door as the Great Doctor entered the front. Every sore throat is diphtheria; every bellyache appendicitis; every infected finger is blood poison.—Doctor Betterman.

BARREN MARRIAGES

Marriage means the formation of a new family; but, there is no such thing as family without at least one child. No matter how selfish may be the contracting parties, a childless union never is productive of the complete satisfaction and supreme happiness that accompany the rearing of children. The causes of barrenness are worthy the study of sociologists as well as of pathologists. A writer in *The Boston Medical Journal* analyzes forty childless marriages. Out of these, one-half proved to be owing to sterility of the husband. One significant statement is that in four of these, or twenty percent, the wives had been subjected to operations based on the assumption that the women were at fault. If that is a fair specimen of the diagnostic care exercised by Boston physicians, we would suggest that the Council on Education get sharply after Harvard and Tufts.

Of these twenty men sterile, the semen was devoid of spermatozoa in ten, seven had had gonorrheal epididymitis, one was tuberculous, one had double atrophy following testicular mumps, and one had chronic gonorrheal prostatitis; all ten of these sterile men had suppurative prostatitis. Six of the remaining ten had either oligo- or necrospermia.

Citing as our authority King David of Judea, we would remark that the denial of gonorrhea by any man does not exclude the possibility of his having been affected by that remorse-inducing malady. Neither is a single examination decisive in excluding the existence of gonococci; nor does their absence contradict the possibility of their having left

obstructive lesions of the vas deferens. We may safely assume gonorrhea as the cause of barrenness in a man, until another adequate etiology has been demonstrated.

But why must we sit down and do nothing just because the vas is closed, and leave our patient to lifelong sterility? I am one of the small remnant who still believe in therapeutics and who, as physicians, like to be paid for their services and to feel that they have earned their fees.

To those others who believe as I do, I would suggest the adoption of the line of treatment indicated below, while holding myself ready to drop this mode for theirs if they know of any that promises better results.

Saturate the man quickly with sulphides, giving him a grain of calx sulphurata, U. S. P., and a milligram of arsenic sulphide, together, seven times a day, until his perspiration is surcharged with the characteristic odor of sulphydric acid. Keep up this saturation with smaller doses for two weeks. Meanwhile with a hard-rubber uterine syringe inject 5 drops of an oily solution of thymol iodide into the prostatic urethra every day. Keep this treatment up for one month, and then test the semen for spermatozoa—and you may have an agreeable surprise for your patient.

Reformers may come and politicians may go, but every new significant fact and every useful idea lives on forever, a permanent gift to the human race in its struggle toward the unknown goal, to which it is proceeding.—Elmer Gates.

WALKING AS AN EXERCISE

The development of the body should never be such as to obtrude itself upon a man's consciousness. As Henry Drummond well said, one's body should be cultivated to just that point of health and proportion where he does not know that he has a body. The man whose muscles and sinews have been so extravagantly nourished and exploited as to exercise a continual dominant influence upon his mind, clamoring for attention and activity, is just as lopsided and in just as mischievous condition as the one whose forehead bulges at the expense of his limbs and chest. Indeed, of the two, it is highly probable that the latter will accomplish more really useful work in the world than the former.

Furthermore, we do not believe it possible for mental and intellectual advancement to take place in the race without incurring more or less modification of its physical attributes. For one of the essential outward manifestations of man's intellectual development is that he becomes a tool-making animal, and tool-making is hostile to the preservation of physical faculties, to say nothing of their development, in about the same ratio that it is conducive to mental progress.

However, we believe the majority of men and women, especially in the crowded centers of civilization, where the pressure of competition is keenly felt, are giving themselves over to the other extreme, and are allowing their mental makeup to eclipse altogether the physical in its demands and attentions, to the great detriment of both. It must be commonly evident to the most casual observer, be he physician or layman, that at the present day men and women, particularly the latter, and more especially in great cities, take altogether too little exercise of the right kind, and that walking has fallen into almost universal decadence among all who are not forced by poverty or circumstances to engage in it. No one walks when by any possibility he can ride, even the shortest distance. Women will procure a transfer and wait several minutes for a second car to take them the last two blocks of their journey; nor are men exempt from the same fatuity. Partly from the national craze for hurry, but largely also from the equally national disinclination to physical exercise, walking has come to be a bore, a nuisance, to be avoided on every possible pretext and occasion.

Now, every medical man and physical instructor knows that of all forms of physical exercise walking is *par excellence* the perfect type. It is, in fact, the natural, elemental type, being precisely what the limbs and trunk were made for. In its performance, there is hardly a muscle in the body that is not directly or indirectly called into normal, wholesome play. During its fulfillment, the mind may be absolutely withdrawn from its motor centers and diverted to various pleasant channels. If given free and natural expression, the exercise will determine for itself the proper degree of speed and vigor. No other form of physical exercise exhibits all of these desirable qualities; and no other has so beneficial an influence upon all of the internal functions of the body.

Of all the agencies in the therapeutic armamentarium of the physician, especially of the family physician, who encounters so many cases of chronic and functional disease, none is more frequently indicated than the habit of walking. It should be prescribed for such patients—judiciously, of course, like

any other measure—far more often and insistently than it is. We do not presume to suggest that the physician does not *know* this; however, he is prone to forget about it—hence, this gentle reminder. If the prophet had bid thee do some great thing, wouldst thou not have done it? We know the rest.

Art that is vital demands freedom of thought and expression, wide liberty of outlook and unhampered liberty of communication.—Cicely Hamilton.

BRONCHITIS IN CHILDREN

A boy of four years, in October, has a bad cold, following heavy playing on a cold day, overloaded with clothing, getting overheated and dropping down on the cold ground for rest. Result, a generalized bronchitis, with a temperature of 102 degrees, wheezing becoming tight toward evening, and restless nights. Treatment commenced after the third day, when conditions were little changed, and the malady showed such obstinacy as to induce a diagnosis of chronic bronchitis.

During the day the boy was kept indoors, the house uniformly heated, the air moistened by pails of water on the steam-coils. He took emetine, 1-64 grain, every hour except near meals, to soothe cough and loosen the sputa, this allaying the mucous engorgement. When the temperature began to rise toward night, we added a defervescent granule (aconitine, digitalin, and veratrine) every hour, to be continued until the cool moist skin and relaxed pulse showed full desired effect; then just often enough to keep this up. Also, he was put in a warm bed, and his chest well rubbed with volatile liniment and covered with warm flannel soaked with oil. For the cough, he was also given a few granules of "anodyne for infants," a capital cough-soother.

He had a good night, and the day following saw the force of the attack broken. Within three days the temperature ceased to rise above normal. The bowels were moved daily by a laxative saline. Ordinarily I am old-fashioned enough to prefer castor oil, which always seems to have a specially beneficial action in children's catarrhs; but this boy simply could not be induced to take it—and he was one of those royal boys who are designed by nature to rule.

The acute symptoms subsided, but there remained a stubborn tendency to continuance and to relapse at the least irritation. So, we ordered an oilsilk vest lined with all-wool flannel, this to be saturated with iodized codliver oil. It was to be worn constantly all winter. To carry off the "dregs" of the catarrh, he was given lozenges composed of licorice and cubeb, an old-fashioned but effective and very acceptable composition.

Had this procedure proved inefficient, we should have fallen back upon copaiba balsam; however, we dislike to use our strongest remedies at first, especially on little children, which would leave us no reserves in case of failure. Benzoic acid and arbutin also are of value in such conditions, but, having special power over the urinary apparatus, we prefer to use them in cases thus complicated. For instance, the boy's sister, a year older, has a troublesome enuresis; and when she has such a catarrh we give her arbutin.

Here the attack ends, and treatment begins—to prevent recurrences in a child strongly predisposed to bronchitis.

The oil jacket is good; the daily cold bath—a sudden plunge followed by vigorous rubbing—is our best weapon. For a time, while he is convalescing, as the weather is variable, we compromise on hot salt baths with rubbing till the skin is red; with this vital difference, that after the cold bath the child is dressed and taken out, while after the hot application he is returned to a warmed bed, where he at once goes to sleep. This indicates the time for each bath—morning for the cold, bedtime for the hot.

There is no safety, but rather certainty of chronicity, in keeping such a child housed up all winter. The greater the tendency to respiratory catarrhs, the more deadly is house air. The open air, even below zero, is essential. Deference to the mother's fears calls for residence in warmer latitudes, where one may live outside with fewer encumbering garments. The balmy breezes from Mexico's torrid waters are very grateful to such children, and at Corpus Christi people bathe in the gulf every day in the year.

ALCOHOL AS A SURGICAL DISINFECTANT

Reference has been made in these columns to experiments made abroad that seemed to prove the superiority of 70-percent alcohol, over one of higher percentage, when used for disinfecting hands and the skin preparatory to surgical operations. Now F. Ahlfeld, of Marburg, basing on personal experience, maintains (*Zeit. f. Geburtsh.;* cf. *Ther. Monatsh.*, 1914, p. 543) that such is not the case, declaring full-strength alcohol to act eminently bactericidal and to be of great penetration.

Leading Articles

Painless Labor, and How It Can Be Secured

A Method of Preparing the Woman for Confinement

By Finley Ellingwood, M. D., Chicago, Illinois

Editor of "Ellingwood's Therapeutist"; author of "The Treatment of Disease," and "Materia Medica, Therapeutics and Pharmacognosy."

EDITORIAL NOTE.—Every doctor has been asked by women expecting to become mothers if there is not some method of preparation which they can follow—some plan of treatment which will reduce the probability of great pain during labor, and assure a safe, comfortable delivery. Doctor Ellingwood is convinced that there is such a method of treatment, one which can be begun early in pregnancy and be carried out under the guidance of any intelligent physician. He describes that method here.

UNUSUAL as it is for a lay journal to publish a professional article, the June number of *McClure's Magazine*, and later *The Woman's Home Companion* and the *Ladies Home Journal*, contain a strictly professional description of a method for the relief of the pains of childbirth, a method which cannot in any part of its phases be adopted independently by the laity. The procedure described in that article has been followed, it is claimed, for eight years in the University of Baden at Freiburg. This method claims to anesthetize the mother so completely, yet, without influencing other conditions of the system, that the pains of parturition are not observed; and, further, that under this method complications and shock to the mother have been avoided, while the rate of infant mortality has greatly decreased.

The method described consists in the use of scopolamine and morphine in ways that are not at all unfamiliar to the profession; nevertheless, to the lay reader, the article will convey the impression of its being a great accomplishment in science, and one that, from a humanitarian standpoint, will stand out for all time as one of the most important the world has known. The author attributes the discovery of the method to Doctors Kroenig and Gauss, and claims that it can be used only in small hospitals, and then only by those who are fully expert in handling such dangerous and concentrated remedies. The insensibility induced is called the "twilight sleep," and to secure it a great deal of skill necessarily must be exercised. The patient must be kept quiet, the mind must be diverted from everything except that which the physician desires, and the patient be put into a state of real or apparent unconsciousness.

"In a report of 3600 cases, twilight sleep," this article says, "has caused no injury to the mother; not a fatality is charged to it. The muscular activity of the mother is not restrained. The birth period is not appreciably lengthened, except in those which call for operative interference. No hemorrhages are found to result from the use of the remedies, and the use of the forceps is in part done away with. As a result of the unconsciousness of pain, there is no nervous exhaustion and there are no complications due to nervous irritation, and the patient makes a rapid and satisfactory recovery."

This certainly is a most desirable accomplishment in obstetrics. However, when we come to know that by the use of very simple measures, by taking our patient into our confidence as soon as pregnancy is determined and continuing our observation of her for the entire term, together with the use of remedies well known to the profession, we may accomplish all of these things in a manner so rational, so natural, and so consistent with the operation of every function within the body, we feel more certain than ever that America and its methods of determining exact drug action with the alkaloids and concentrations, joined with definite therapy, really is deserving of some little praise, instead of having all of it bestowed upon our German confrères, as is now the habit.

There is a tradition and belief, based upon a passage in the Bible, to the effect that, because of the sin of the first woman, the statement, "In sorrow shalt thou bring forth children," was intended as a decree that, as a direct punishment, pain was to be the unavoidable lot of every mother forever after. Inasmuch as this curse was pronounced after the great sin, which is said to have inflicted sorrow upon all mankind, was committed, the conclusion is logical and authorized that woman originally was so created as to give birth painlessly to her offspring. Other essential functions of the body are performed in a painless and to a large extent pleasant manner, and, so, it is a rational conclusion that the meaning to be conveyed in the biblical quotation is that the curse of pain in giving birth would attach as the result of the sins that would be committed in every direction and in every mode of human activities—that these would bring about such a physical condition in women that pain at childbirth must unavoidably result.

I believe that there can, and will, be found in nature a cure for every ill when the intelligence of man has determined what that cure is to be. It remains, therefore, for those whom God has blessed with their intelligences to peer into the causes of disease and the action of remedies, to determine and adjust to these perversions of the potential mother's economy, of which bad habits have been the cause, a cure in the strictest sense of the word—a method or methods that shall preserve intact every function of the body and prevent its being disturbed by the unusual—although perfectly normal—condition of pregnancy and labor.

The greatest mystery in science is the mystery of life, its origin, its perpetuation. Motherhood is the working together of the woman with God in such a manner that the physical life of the mother together with the spiritual essence of God shall be put into a new being that is to be newly started upon a course of human existence.

In animals—and in woman in her natural state (which is understood to be a state of physical being unhampered by any of the customs, habits, methods or demands of civilization)—parturition is painless, or comparatively so, and devoid of danger. Women of savage nations bear children without experiencing pain. They live much in the open air, their physical nature is developed almost exclusively and is thus more nearly normal than that of their civilized sisters. It was the opinion of Huxley that the bearing of children ought to become free from danger as much to the civilized woman as to the savage. I positively believe that to a mother who is physically perfect parturition can be made devoid of danger and almost, or even entirely in some cases, painless.

It is surprising that the belief is general among civilized peoples that the pain and the complications of childbirth usually are unavoidable and that a severe or dangerous delivery is a natural condition; and this opinion is fostered to a large extent by the profession. Being thus so, it is looked forward to by the expectant mother with dire anticipation and dread, as essentially hazardous both to herself and her child; and this fear with which many look forward so influences their mental condition as in some cases almost to unbalance the mind.

Pregnancy and Childbirth Are Physiological Conditions

After an observation of thirty years, I have come to the conclusion, as have many others who have observed in the same lines, that childbirth is not essentially dangerous nor even severe in its processes; that it not only is possible to modify the conditions of labor, but that the woman can be advised and existent conditions so influenced or controlled as to make labor, if not absolutely painless, at least devoid of danger, and an event to be looked forward to without fear.

We must accept the assertion that pregnancy and child-bearing are normal physiological conditions. They are natural organic functions, the same as eating or sleeping or the evacuation of the secretions of the body. In the case of these latter conditions we tolerate no abnormality. Why, then, should we tolerate any variation whatever from the normal in women during pregnancy or at the time of childbirth?

With all our advances in every other branch of science, we have paid too little attention to this important condition. It is an unwarranted mistake for a physician today, in view of the marvelous advance in all things else in the profession, to conclude that this condition cannot be corrected. It behooves the physician—in fact, it is his duty to mankind—to charge his own mind first of all with the truth of the claim that these abnormalities are pathological, unnecessary, and unjustified, and that, if he does not correct them, he is personally to blame for much suffering and, maybe, the death either of the patient or of the child. The physician

must educate himself to detect as soon as it occurs every variation from the normal in the pregnant woman; and we have now the best means for that purpose the world has ever known. Meeting these, as he can if he is correctly informed with the indicated measure or measures, he can do away entirely with them all in large part, and ultimately fully.

So common is the belief of every mother that she must suffer pain and discomfort and a long train of unavoidable symptoms that she submits uncomplainingly, believing that these are unavoidable. It, therefore, is the duty of the physician, not only to educate himself to this belief, but so positively to educate his patients to the fact that, if they place themselves in the hands of a physician at the beginning of the pregnant term, the long train of symptoms is avoidable, that they can enjoy perfect health, can approach the moment of childbirth without fear, can pass through it with no more danger than if sleeping in their own comfortable bed, and can go through all this with full consciousness of every procedure, yet, experience so little pain as to be absolutely unobjectionable to them; and, moreover, that their recovery will be without any untoward incident. In fact, in most cases, so little impression has been made upon them that they are inclined, like the Freiburg patients, to get up immediately and dress.

Unless, however, the patient is fully educated as indicated, she will not carry out the instructions of the physician, and, unless the physician so thoroughly educates himself and becomes convinced of the necessity of following out each train of abnormality for its immediate relief, he will not give the essential advice.

Under the method herein described, each abnormal condition becomes a specific one; and, as soon as conditions become specific and we are enabled to adjust a remedy for the specific condition, we find them to be precisely as other specific conditions—very amenable to treatment. If we fail to obtain this knowledge, the patient has reason to complain most bitterly of our ignorance or negligence.

For our criterion, we must keep in mind the fact that natural labor should be a short, easy act, with muscular effort at expulsion sufficient, yet, devoid of severe pain, and should occupy a period of from two to six hours; the severe pain, if any, occurring only during the actual expulsive effort.

The method, as above referred to, of Kroenig and Gauss is defective, in that nothing else is taken into consideration but the use of certain anesthetics. We have other anodynes and anesthetics that relieve pain which are greatly in advance of the methods of even the recent past; but the method which I am advocating does not resort exclusively to artificial means, and such dependence course is not nearly as satisfactory or as consistent with life as it is to put the patient into an absolutely normal physical condition, so that disturbed function, distress, pain, and shock are not induced by the processes of labor. Normal health-processes are not interfered with and there is to be no such thing as "recovery" after parturition, as the patient remains in the same normal condition after labor as she was in before, without shock, weakness, nervous irritation or other perversion of any organs or function.

The Natural Versus the Artificial Method

I have had an opportunity of observing, or others have observed for me, more than 1000 cases, and the results of the course to the mother and the physical condition subsequently of mother and child are so far beyond that which anyone inexperienced would anticipate that is is thought by some almost to be miraculous.

The immense superiority of this course over the Freiburg course of exclusive dependence upon narcotic drugs, is, the retaining of a perfectly normal condition, the doing away with nervous and muscular irritation, the preservation of the functions of the stomach and intestinal tract, in fact, the entire preservation of all the normal body functions. To secure such important results, can be no other than infinitely superior to a method that consists only in the alleviation of pain.

A course which demands the intent observation of at least four individuals, watching every detail so closely that the course adopted does not produce death rather than amelioration, cannot but be hazardous. Such a course must be at once considered inferior to the course above described. The former I call the "normal" course; the Freiburg method I call the "artificial" course.

Among the traditions that are seriously at fault, there is one that the father seems to take pleasure in. It is that a new-born child must be a heavy child. Long observation has taught me that labor with heavy babes is correspondingly increased in severity, and that it is not the heavy infants alone that make strong children, nor that small children are essentially difficult to raise. We have all

seen 4-pound babes that did as well in every particular as those that weighed 10 pounds. On the other hand, many infants born with a weight of from 8 to 12 pounds have been as difficult, in every way, to raise as those who were smaller; neither are those that are heavy any more perfect in adult life than those that are light. Pregnancies that are prolonged to ten or eleven months make almost invariably very severe deliveries, because of the increased growth and development of the child.

No physician who has not tried to modify the development of the fetus during gestation has any idea how readily this can be brought about. In fact, so readily can it be accomplished that a physician must be exceedingly cautious about advising his patient, in order that the infant be not insufficiently developed. One of the strong factors in accomplishing this is, the dieting of the mother.

Importance of the Nutrition of the Mother

In the second year of my practice, I had the opportunity to observe the influence of deficient feeding of the mother upon the child. I was located among miners. A strike was declared and for a year there was no work. After the first month, extreme poverty settled down upon the entire community, and for the intervening months almost the entire food of from 5000 to 7000 people was corn-meal and water, with a limited supply of meal. I have always regretted that I did not secure exact statistics of this famine, as I readily could have done. If I had had any knowledge of the use I could have put them to in the future, I certainly should not have neglected it.

The proportion of expectant mothers who brought forth their children alive was very small. Miscarriages were the rule. Of those children who were born alive, very few lived. The food of the mother had been so scanty and covered so small a proportion of the demands of the system of the little one that every child was in an unbalanced condition physically. They were very greatly emaciated. Their bones were long, but were soft. The heart's action was feeble; the muscular contractions were imperfect, but there was, as I now remember, no great number of deformities nor malformations. The defect was a general one. If the deliveries were severe, they were so because of the weakness of the mother.

This observation literally convinced me that a careful feeding of the mother, with a thorough understanding of the demands both of the mother and the fetus, would produce a child of proper weight, with proper osseous and muscular development, one that could be readily expelled without any interference whatever, with the normal functionating of the vital organs. These facts I have found to be true.

The Question of Diet

In order to make essential adjustment for each mother, we advise that the patient herself enter fully into the consideration. In the first place, a prevailing inclination to acidity is nearly always present, and this usually is due to hyperchlorhydria. I have determined that, if the fruit-acids are administered in a reasonable quantity, there will be a diminution of the secretions of hydrochloric acid and a more normal balance of the entire acid constituents of the gastric fluids. This is quite important with all patients, but much more important with those who are inclined to bring forth large children with overdevelopment, especially with an excessive bony development. With this latter class, the nitrogenous foods must be avoided to a greater or less extent.

While it is common to say that a patient should avoid meat entirely, we do not lay this down as an arbitrary rule, but we do advise these patients to exclude meat entirely, during the latter part of the pregnant period, unless there is a peculiar weakness that can only be overcome by red meats. I have seldom found this to be the case, as white meats, fish, with eggs and milk usually are sufficient and their nitrogenous content is not too great.

Patients in a medium condition are allowed a small beefsteak two or three times a week, unless the specific gravity of the urine is very high. With such patients, we exclude meats, coffee and tea during the early period entirely and only for a short period at a time permit these later. This measure will be found sufficient in most cases; but, there are some extreme cases, especially with women with black hair and black eyes, where the uric-acid tendency is very strong, in which I have found it necessary to keep the patient upon fruit and vegetables alone. Experiments with fruit dieting alone have been carried to such an extent in some cases as to prevent proper ossification of the bone, the infants being born with a structure largely cartilaginous.

It is often found where the infant is born with excessive body development that the mother becomes greatly emaciated; in fact, there are many mothers who give up the

nutrition of certain portions of their system to the child. Occasionally these mothers become very feeble, and it becomes necessary to feed them on concentrated nutrients. Those foods which do not present a large percentage of earthy salts, such as rice, potatoes, eggs, products of wheat, flour, milk, these are essential with this class of patient. For animal food, fish is excellent for these also, as it supplies a fair amount of nerve-food. These patients do well also on a certain amount of corn-meal, as this assists in preventing constipation, which such concentrated food is apt to induce.

The supply of the bony and nerve structures of the infant makes such a demand upon some mothers for the phosphates as to induce spinal irritation or mental irregularities, and in some cases puerperal mania. I had a case which illustrates this fact.

A mother, because of severe headache, had been kept on morphine for two weeks. When death threatened, the woman was placed in my hands for treatment. I let her come out from under the morphine and discovered her to be a raving maniac. She was restored to a normal mental condition within ten days by use of bovinine in large doses every hour or the two, the phosphates, milk and eggs, with counterirritation to the spine—which was exquisitely tender.

Regulation of the Mother's Habits

The habits of elimination of the patient must have careful consideration. With some patients, the normal excretion of the skin and kidneys is limited and constipation is almost constantly present. If those foods that contain a large quantity of waste matter, that will stimulate peristalsis, and a minimum of nitrogenous substance, with an abundance of water be furnished, there will be material benefit.

Careful advice must be given the patient concerning dressing. She must not have compression anywhere. There must be but little weight hanging from the waist: the weight must be carried from the shoulders. The clothes must be light, yet sufficiently warm and comfortable. This goes without saying.

Out of door air and sunshine are exceedingly important to pregnant women; cheerfulness of mind, the cultivation of higher ideals, the entertaining of pleasant thoughts and generous impulses, the carrying out of some course of occupation in the home that is in every way pleasurable, all this is of benefit. The patient must have an abundance of sleep—eight or ten hours during the night, while during the later stages of pregnancy she also must take a nap during the day whenever the inclination is strongest. Baths are of vital importance to a pregnant woman, but they should be neither too hot nor too cold, and should not be too greatly prolonged. Her own judgment and sensations must decide.

Advice About Hygienic and Medical Regimen

I am very much in favor of hot sitz-baths during the last three months of pregnancy. If the patient is of rigid and firm muscular fiber, a bath must, early in the term, be taken once in eight or ten days; but, if she is of relaxed and loose fiber and lacks muscular tone, they should be taken less often, should not be long continued, nor as hot. In extreme cases of relaxation, hot baths should be avoided entirely. However, only seldom have I seen that hot sitz-baths induced any other than desirable results.

The use of oil as an external application, for many women, is a source of comfort. Pure olive-oil may be applied over the abdominal muscles when they become very tight or when the skin over the pelvic structure is dry and harsh; the oil may be applied also to the thighs and the external genitals freely. Also, if constipation is present or if there is sluggishness of the liver, with a tendency to slight discoloration of the conjunctivæ, olive-oil may be taken internally. The bowels may be relaxed with occasional doses of sodium phosphate, regularly given.

During the second stage of labor, application of compresses wrung from very warm oil or from hot water are very beneficial in dilating the perineum. Further, if the sac is broken and amniotic fluid has escaped, an injection of warm sterilized olive-oil into the vagina is of material service. Constipation should be overcome by simple measures. The use of liquid petrolatum, or paraffin-oil, is now being found serviceable, but active physics must be avoided. Laxatives must be selected with great care.

I believe that the blood pressure of every patient who is at all inclined to perversions of health during pregnancy should be ascertained once in two weeks, and as soon as 135 or 140 mm. is reached close watch should be kept upon the urine; then, if any evidences whatever of kidney complication appear, these must be met promptly and positively. The first of these indications is restlessness, then backache, slight headache, some insomnia. Violent measures are not justifiable,

but the patient should be dieted carefully and watched closely.

For the backache, hot dry applications may be made by means of an ordinary hot-water-bag, for a period of one to two hours, two or three times in twenty-four hours. The patient should be given gelsemium and macrotys, in fair physiological doses, every two hours. This, in my own practice, is the best combination that I have yet found for preventing kidney complication. Any irritation of the spinal column must be treated with bryonia, in addition to the above, and, if there is much tenderness upon pressure, an application should be made of kaolin plaster or some mild dehydrating agent, to promote the action of the remedies.

If under these measures blood pressure increases, the pulse becomes more rapid and hard, and the patient complains of persistent headache, she must have veratrum in 1-drop doses every two, three or four hours, sufficient to reduce the pulse rate to 65 per minute. This will do away with the headache and also increase the renal activity.

This same remedy—veratrum viride—also exercises a most remarkable antagonistic influence upon the toxins, preventing uremic poisoning more often than will any other one remedy of which we have knowledge. Not long ago we had an excellent illustration of the advantage of this remedy, in the case of a patient who once had had eclampsia, and whose sister, a few months before, had died of puerperal convulsions. I saw her one morning at the end of the fifth month of pregnancy. She was most despondent, confident of a fatal ending, although not usually a melancholy patient or one who anticipated trouble.

The edema was quite general, the pulse ran 120 and was very hard, although albumin in only a slight quantity was present in the urine; the characteristic headache was very pronounced; also, there was some liver complication, the patient being slightly jaundiced; there even was some muscular irritation, with considerable twitching of muscular fibers.

Almost the entire treatment of this patient consisted of veratrum in 1- or 2-drop doses, watched carefully. She received a light laxative, while macrotys in small doses for the muscular irritability and the soreness was given. She was dieted in line with the above suggestions, and all worry and anxiety was removed. In three weeks, the evidences of threatened uremia were gone. In four weeks, the patient's condition was normal, and it continued thus up till the time of confinement, which also was normal, and uneventful in every detail.

Other conditions must be met as they occur. These are general rules which you may apply to all patients in the same way. I have studied the symptoms with many other physicians, and we are agreed on the use of certain specific remedies which are found indicated occasionally and which seem to exercise a very favorable effect.

Macrotys and Mitchella as Specifics

Macrotys not only controls the muscular irritability, but it acts as a pure nerve sedative of a tonic character; which does away both with nerve and muscular irritation at once. Besides, as the remedy has a specific influence, directly exercised, over the entire reproductive function, it seems to modify every unfavorable condition that is apt to be present during labor.

Another excellent remedy is mitchella. The influence of this hardly can be defined, but, in combination with macrotys—we are confident—these two remedies do much for the muscular irritability. A result of this, to which we would call the reader's attention, is the fact that, when muscular contractions occur, either during the first or second stages, the patient experiences all sensation of contraction, but with but little, if any, pain. In many of my cases, there has been an *entire absence of pain from muscular contraction.*

I have recently had a most marked illustration of this in a patient who called me one Wednesday night, expecting a confinement at that time, because the apparent muscular contractions all afternoon and evening were so strong. There was, however, no pain nor distress, not even tiny shooting pains. I found the internal os obliterated, the external os, however, was unaltered.

This woman went about her work singing and happy, sleeping every night in an undisturbed and restful manner until Saturday, then the external os was dilated to the size of a silver half-dollar, but as yet not a single labor-pain had been experienced. The child's head had descended until it was pressing lightly against the perineum, but every condition was normal. The os was patulous, all the parts were moist, and further dilatation seemed to depend only upon the breaking of the water-sac. As everything seemed to be ready, I insisted upon her giving up her work and remaining very quiet the rest of the day. All this time she was very cheerful—in perfect health in every way. She ate her regular meals to the full extent of my permission and

was exceedingly good-natured and happy, having no dread whatever of the final effort.

Returning to her a little before midnight, I told her that there was no need of delaying any longer. She then had a slight attack of nausea, but went to bed at my request. Immediately I introduced my finger over the protruding sac, broke the water at the highest point I could reach against the os. I then turned the finger and caught the edge of the os, giving it a firm pull, which brought on a strong expulsive effort. This lasted, with one interval, for fifteen minutes, when the child was born. The mother was in constant good humor and without pain of any severe type whatever, in fact, had so little pain that when I had conversation with her about it a little later she said she had frequently suffered very much more pain from intestinal indigestion and ordinary colic.

Results Often Are Surprising, with Incidental Benefits

This is a history of a large number of the pregnant women that go through this course. In the brief space allotted me in this journal I am not able to extend any other of the points, but there are many of them. However, when the physician learns the essential points and undertakes to apply them to his patients—as he well can do—he is surprised at the strikingly beneficial results. One of my cases, the wife of a U. S. senator, had suffered agonizing pain for five days and nights, with her first child, and threatened she would commit suicide before she would consent to pass through another labor with her second child. I succeeded, when she was three months pregnant, in establishing her confidence in the fact that I could get her through the term and through a labor without undue pain.

She followed my directions carefully. On the morning of the confinement, the painless contractions began about 3 o'clock, awakening her from a natural restful sleep. Later, tiny shooting pains appeared every thirty minutes until 8 o'clock, when I was called. The expulsive contractions were entirely painless. I took precisely the same course with this woman that we had taken with the one above described. I broke the water-sac at ten minutes after nine (as soon as I could get ready), and the child was born, with two expulsive pains, at nine thirty.

The most desirable result of this course is that the mother preserves the normal integrity and perfect functional operation of every organ in the body. She feels as well in an hour after confinement as she would feel at any time in normal health. It is most difficult to keep these patients in bed, because they feel so well; and, yet, unlike the practice at Freiburg, I insist upon the patient remaining in bed for from eight to fourteen days, in order to preserve the integrity of the organs and promote normal involution. If the patient has previously suffered from prolapse, displacements, uterine irregularities, leucorrhea or other distressing difficulty, I expect these all to be greatly relieved by the confinement, and we are confident that the remedies used promote such a result most materially.

Furthermore, the health of the infant seems to be benefited also by this course. These babies seem to be hardy and robust and to preserve their health under more aggravations. Also, the mother is enabled to nurse them with a full supply of rich, nutritious milk.

In comparing this method with the method discussed in the article first referred to, it seems to me that this course is in every way infinitely superior, inasmuch as artificial measures are not depended upon, but our entire reliance is placed upon natural conditions and upon the preservation of integrity of the organs and their normal functionating. If the Freiburg doctors and others adopting that course would give to their patients some remedy that would do away with undue muscular irritability, such as macrotys and mitchella, which would quiet their patients during pregnancy and relieve each individual condition, it seems to me they would have almost ideal results.

The Hyoscine and Morphine Combination a Great Aid

In this connection, I wish to say a word about the aid to be derived from a judicious resort to the hyoscine, morphine, and cactoid combination. I am confident that, given in small dosage, this valuable combination can be employed with the course of the general treatment which I have advised so as to do away entirely with the irritable and painful conditions that occur so frequently in these cases. It will give a much more satisfactory result than the scopolamine and morphine treatment, without its dangers. This combination can be so adjusted both to mother and child as to produce a smooth, consistent, quieting influence, entirely devoid of danger.

With the conjoint use of the H-M-C and our method, we at once secure the greatest possible condition of comfort. Where there

are tendencies and conditions not fully covered by our method, these are met in the most satisfactory manner by the marked influence of carefully adjusted doses of H-M-C; thus avoiding the dangers of the foreign combination, with all the advantages of the normal conditions existing in the patient from previous care.

I trust I may have interested the readers of this journal to such an extent that they will look into this simple method, that they will educate themselves to believe that startling results can be obtained, and then will endeavor to educate their patients in the same belief that they will adopt this course, if for no other purpose than from a humanitarian standpoint.

It is surprising how seldom the forceps is needed in these cases. So far as I have observed, there has been not a case of placenta prævia, no case of eclampsia, no case of extreme malposition, and no necessity for the use of the forceps except in a very few of these cases, in my entire experience—which covers more than three decades. I am glad to say also that this course does away, to a certain extent, with commercialism in obstetrics, which is now apparent in the larger number of the hospital cases. I do not feel like condemning the profession at large, but the too often turning, for the increased fee, of every confinement-case into a surgical one has, in my observation in many instances, resulted in a manner that could not be classed as other than actually criminal. If this is a severe statement I can only regret that the statement is true. I am not accountable for its severity.

How to Examine the Rectum

By Charles J. Drueck, M. D., Chicago, Illinois

THE object of this paper is, to bring before the reader the essentials of an examination of the rectal region, and to assist the physician in making an intelligent diagnosis of his patient's ailment, in place of trusting to luck and a "shotgun" prescription in the form of an injection or local application. It is a deplorable fact that many general practitioners overlook details and make but a cursory examination of patients suffering from rectal disorders; indeed, I have had many such patients come to me whom their doctor had not even examined.

Before we can diagnose or intelligently treat disturbances in the pelvis, we must learn not only to inspect and palpate the exterior surfaces, but also to explore its hollow cavities. A thorough rectal examination not merely considers the coats of the last few inches of the alimentary tract, but the digital exploration determines the condition of all the organs and structures within the true pelvis. In gynecology, the rectal examination confirms the vaginal findings, and in diagnosing conditions in the male pelvis it is the only method of actually feeling the parts in question.

I cannot go into details here, but doubtless every physician has on hand cases where the weight of what has been said will be appreciated. The rest of this paper will be limited to the findings in and pertaining to the rectum; but I urge the reader never to forget, when exploring these parts, that all the pelvic organs are bound together by one grand nerve-plexus, and that nowhere else in the body are there so many nerve impulses. Frequently a robust man is invalided by direct or by reflex disturbances, while very little pathological change can be found.

The practitioner who wishes to retain the confidence of his patient must examine the rectum as carefully as he would any other part of the body, for the time is past when patients will be satisfied with a placebo. All modern textbooks on surgery find it necessary to incorporate a chapter on diseases of the anus and rectum.

Rectal diseases are always progressive, and an early diagnosis may mean a slight operation and no absence from business, while later the condition may be so aggravated as to confine the patient to his bed for weeks or months. Almost every patient who realizes that he has rectal trouble informs his physician that he is suffering from piles, and, I am sorry to add, many doctors accept the patient's diagnosis and prescribe without ever examining the parts.

The symptoms of rectal abnormalities sometimes draw the patient's attention at once to this particular organ, but again, because of the intimate connection of the rectum and other pelvic and abdominal organs, the symptoms may be so obscure or the onset so insidious that reflex disturbance elsewhere

is first complained of and the patient is treated for disease of some other organ.

While the symptoms may refer in general to this part of the body, they by no means indicate the specific disease. The odor of cancer or the pain of fissure are characteristic, still, they do not in any way indicate any associated condition or disease.

The Preliminary Examination

The preliminary interrogation of the patient should be systematic, so as to cover carefully and completely the whole case without repeating. It is a good plan to let the patient tell his own story, and then for the physician to bring out the patient's age, physical condition and nervous temperament, the duration of the disease and the progress of the symptoms since their appreciation, together with whatever effect they have on the general health. If pain is complained of, ascertain its character, whether it is sharp and cutting, burning or dull and aching; also its relation to defecation, whether it occurs before, during or after the passage of the stool, and whether it is constant or intermittent; and its location, whether at the anus, within the rectum, in the pelvis or in the sacrum, or whether it radiates from a given point. The patient's statement that he has pain in the rectum is too indefinite to be accepted without further questioning.

If there are any discharges, their nature is important, as is also the presence and amount of blood, mucus or pus. If blood is present, find out whether it is dark or bright in color. The sphincters must be investigated as to whether they are relaxed or abnormally contracted, and, if protrusions exist, whether they recede by themselves or must be replaced, and whether their replacement is difficult or painful. It is important, further, to ascertain the character of the protrusion, whether smooth or nodular, hard or soft or covered with rugæ, and whether it is tender or sensitive to the touch, and whether there are any ulcers; also, extrusion occurs only during defecation or the protrusion is continuously exposed or can be produced at will. Any evidence in the general economy of such other diseases as anemia, tuberculosis or syphilis must be taken into consideration; and whether the patient has had gonorrhea or any urethral stricture.

If a female and married, how many children or miscarriages, and was there any rupture of the perineum? Is there any uterine or ovarian pain, any vaginal discharge, prolapse of the uterus or difficulty in urinating? If a virgin, inquire as to the menstruation, whether regular, painful, scant or profuse.

The occupation or mode of life of the patient may not have been a factor in causing the disease; nevertheless it may be important in mapping out his future mode of living as to habits, environment, and diet. Does he use enemas frequently, or, like the proverbial Irishmen, take his pipe and daily paper to the water-closet with him? Does the rectum feel full after the evacuation or is there a desire for further action? Is there a history of sodomy or venereal disease, or any family history of tuberculosis or cancer?

The examination of any case, medical or surgical, is incomplete unless we go into the family- and personal history. Often it is tedious and much time is wasted on irrelevant matter; yet, frequently it emphasizes idiosyncrasies. For convenience, I have arranged all the important items of the examination in an abbreviated, but comprehensive, form in my record-sheet. I want to emphasize the importance of keeping these records in even the simpler cases.

It is convenient for those treating rectal diseases to have a water-closet adjoining the examining-room, so that patients may empty their bowels just before the examination. When this is not practicable, and only a few rectal cases are seen, a commode, which can be screened or easily pushed aside, when not in use, will serve the purpose. If possible, a cathartic should be ordered taken the day before, and the rectum should be washed out with an enema just before proceeding to examine. This procedure is absolutely necessary when the upper part of the rectum is to be examined, as otherwise, when the speculum is introduced, the field may he obstructed with feces and a thorough inspection is impossible; also, because the straining during defecation brings down hemorrhoids, polypi or prolapsed bowel and thus assists in the diagnosis. Still, even with these precautions, you occasionally encounter a case of fecal impaction where the rectum is lined with inspissated feces.

Occasionally I prefer to make an examination without this preparation, in order that I may find the rectum more in its customary condition, while any pus, blood, mucus or hardened feces may be found the more readily. Small protrusions or prolapses often retract within the anus when the patient walks a little; hence, it is sometimes necessary to examine the patient, on the commode or just after arising, before he takes a step.

All constricting bands, clothing or corsets must be removed or loosened, for they have a tendency to force the bowels into the pelvis. The bladder must also be emptied. It often is necessary to administer an anesthetic to permit of a thorough examination of all parts and to completely relax the sphincter. Gentleness is important in making an examination of the rectum, as thus much pain may be avoided and spasm of the sphinter prevented. Very much also depends upon the skill of the examiner, because sometimes the ordeal may be very painful, and doubly so if carelessly performed.

Only few instruments are required, and only such as every physician has in his case. In examining the upper portion of the rectum, a speculum and good light are necessary. A speculum illuminated with a small electric lamp on a slender shank clamped into position on the ordinary speculum is the most satisfactory, although good direct or reflected light will answer the purpose.

As regards the position of the patient, the exaggerated lithotomy, the Sims, and the knee-chest positions each has its special advantages in particular instances. The ordinary dorsal or the lateroprone position is all that is needed for the lower rectum, although many operators prefer the exaggerated lithotomy position, the patient's hips being elevated by a cushion. The knee-chest, however, is the only position that permits an examination of the higher portions of the rectum or sigmoid flexure. The Sims position, with the thighs strongly flexed, the breast on the table, and the left arm hanging over the edge, inverts the pelvis and allows the contents to fall upon the front wall of the abdomen; the lumen of the rectum tends to gap, and the mucous membrane falls away from the end of the speculum.

This concludes the preliminaries to a thorough rectal examination, and when we have covered these details we have prepared the patient and ourselves for the manual part of the diagnosis.

For the benefit of those who may wish it, I append a copy of the outline I have followed, and suggest that each case be recorded on some such plan, each history naturally requiring emphasis on its individual symptoms.

EXAMPLE OF RECORD-SHEET

Case Number.....Name.....Address
Occupation.....Age.....
S. M. W.....Children.....Miscarriages.
Family History.....
Personal history and present illness.....
Stool—Character.....Frequency.....
Incontinence.....
Pain—Character.....Relation to defecation
.....Constant or intermittent
Discharges—Blood.....Pus.....Mucus.....
Protrusions.....
Condition of the other organs—Generative.....
Urinary.....Abdominal.....
Nervous system.....
Examination—Inspection.....Digital examination.....Sphincters.....Specular examination.....Diagnosis.....Treatment.....
Dismissed.....Condition.....

The Systematic Examination

The examination comprises inspection and digital and instrumental examination. Inspection may reveal the conditicns which produce various neurasthenic or anemic conditions. The shape of the anus is sometimes important, whether normal, protruded or drawn in (funnel-shaped). The amount of pigmentation about the parts also must be noted. Evidences of abrasions, scratches, pediculi or worms may be seen on the skin about the anus; so, also, signs of inflammation or scars. A prolapsed rectum may be the cause of prolonged vomiting or pertussis. An ulcer, fissure or pruritus may excite rectal tenesmus and also produce scybalous stools. Protruding tumors, condylomata (such as hemorrhoids, polypi or malignant growths) and the like may also be seen and their characteristics noted. Very often a distinct fulness or bulging of the anus is seen where internal hemorrhoids are present, even if they do not protrude. Where epithelioma exists at or outside of the anus, a small piece may be clipped off for microscopic examination, without causing any discomfort to the patient, by applying a little local anesthetic.

After carefully inspecting the anus and perineum, the field may be widened by gently pulling the anus open, a hand being placed on each buttock, the finger-tips pointing toward the anus. If the patient bears down at the same time, a considerable portion of the mucous membrane will be everted; the extent depending upon the relaxation of the sphincters. In this way the lower inch or more of the bowel may be inspected without using a speculum, and a fissure, fistulous opening, gonorrhea in women, syphilitic erosions, eczematous excoriations or pinworms may be brought into view. In many instances, the internal opening of a fistula is situated immediately within the external sphincter; in which case it may be seen by this procedure.

During this maneuver any tender or indurated areas may be mapped out. Fistulous tracts are easily followed up without the use of the probe. In women who have relaxed sphincters, a portion of the interior of the rectum may be everted by introducing the index-finger into the vagina and pressing the rectal walls through the anus. The presence of a discharge issuing from the anus indicates a diseased condition within the rectum; while a sunken ischiorectal fossæ and retracted anus surrounded by a profuse growth of soft hair would immediately suggest malignant disease or tuberculosis within the rectum, with general systemic involvement.

Examination of the Rectum

Digital examination of the interior of the rectum follows inspection, and it is the most important of all the procedures. The practitioner who is familiar with the digital examination of these parts can diagnose better with his finger than by any other way. Fully 80 percent of all rectal disorders may be diagnosed with the finger, and the other 20 percent by the history of the case and a specular examination.

Digital examination not only confirms the opinion regarding the local conditions found by inspection, but also determines other conditions to which the attention may have been directed. The finger should first be swept around outside of the anus to palpate any induration or tenderness, either superficial or deep, which might indicate abscess or fistula.

For internal examination, the finger-nail should be well trimmed and the finger anointed with olive-oil—this not being as easily rubbed off by the sphincter as is soap or vaseline. Whatever lubricant is used must be kept in collapsible tubes, as this is the only way of having a clean sterile lubricant at all times. The cost is little and the advantages great over the old-fashioned jar of vaseline, into which fingers and instruments were repeatedly dipped, thus carrying infection from one patient to another. For esthetic reasons, the rubber-tissue finger-cot may be worn, because it will not affect the sensibility of the touch and may be washed and anointed.

This attended to, the finger is then gently insinuated through the anus, with a rotary or boring motion, the patient being asked to bear down at the same time, and the rectum then is systematically palpated as high as the finger will reach. The introduction will be rendered much easier if the normal direction of the rectum is remembered and the finger is first directed up and forward toward the neck of the bladder, until the sphincter is passed, and then backward toward the sacrum. The sphincter is very sensitive, and any undue haste or roughness may induce spasm of the muscle, which will make the examination very painful and unsatisfactory. The iliac fossæ should be firmly explored, to determine whether there is any tenderness or tumor. The finger should be introduced its full length, and, by passing the other fingers of the hand back into the intergluteal space instead of doubling them into the palm, an increased reach is obtained; also, if the patient bears down or strains during the examination, one or two inches more of the rectum can be examined.

The condition of the sphincter should be noted: whether it is relaxed, suggesting a debilitated system, cancer or large internal hemorrhoids, which latter weaken the muscle by frequently protruding; or contracted, signifying acute disease in the anal canal, anal fissure or a nervous subject; or whether hypertrophied, denoting chronic disease; or, finally, whether it is atrophied. The spasmodic action should be overcome by slow, steady pressure, as the sphincter is always forcibly contracted upon attempting examination. Frequently the internal opening of a fistula is found, just within the sphincter, as a rough, indurated and sensitive spot which may be elevated or depressed (ulcerated); or the path of the sinus is felt by its cord-like resistance.

If a tumor is felt, its size, shape, location, movability, and resistance are to be ascertained, and, if possible, a small piece removed later, through the speculum, for microscopic examination. Fecal impaction of the rectum or colon has often been mistaken for cancer, polypi, stricture, abscesses, gallstones; and other foreign bodies are occasionally felt. The tumor of appendicitis is found in the right pelvis if the appendix is low, and rectal palpation should be practiced in every case of suspected appendicitis. Malignant disease of the rectum or pelvis, the tumor of intussusception or an infected lymph-gland may also be felt. Induration or constriction of the walls and the condition of the other pelvic organs is to be determined.

Investigate The Prostate

Palpation of the prostate gland may reveal enlargement, induration, tenderness or soft points. The uterus and appendages should always be examined. Vesical irritation is a frequent source of reflex disturbance, hence, the bladder always should be examined. A

calculus may be found to be the origin of the trouble, although no symptoms were manifested. A digital examination through the rectum often assists considerably in diagnosing diseases of the urethra, Cowper's glands, seminal vesicles, bladder, vagina, and pelvic bones; also, tumors and abscesses of the peritoneal cavity, dislocation of the femur, ischial hernia and aneurysms of the gluteal artery. Very little information is gained by digital examination regarding hemorrhoids, except in rare cases where much hypertrophy has occurred in the mucous membrane. Otherwise, the hemorrhoid being covered with nearly normal mucous membrane, gives no differential tactile sensation.

Thus, we see, a digital examination through the rectum is imperative whenever symptoms indicate disease below the pelvic brim.

Upon withdrawing the finger, it may be covered or streaked with blood, pus or mucus, each with its own significance. If a stricture is so small as not to admit the passage of the finger, force should not be used, as rupture of the bowel has followed such an attempt. The cervix, the fundus of the uterus or the prostate gland may be mistaken for a tumor. In rare instances, it may be necessary to introduce the whole hand into the rectum, but, as the walls are so crowded upon the fingers and the folds of the mucous membrane fall in between the fingers, very little knowledge is obtained, while there always is the danger of rupturing the bowel. A laparotomy and intraabdominal palpation is preferable when the disease is high up in the rectum or in the sigmoid flexure. A digital examination carefully performed is not painful unless a fissure is present.

Instrumental Examination

That part of the rectum beyond the reach of the finger may be examined by means of bougies or sounds, although their use is open to criticism and often is contraindicated. Only soft, flexible rubber instruments (Wales's bougies) should be employed, and these must be handled with great caution. They should be hollow, so as to permit the injection of fluid through them into the part beyond, thus dilating the rectum in advance in effacing any folds that might obstruct their introduction.

Too great value must not be placed upon bougies, inasmuch as their field of usefulness is limited, and even in a healthy bowel the sensation of obstruction often is produced, and may be misleading. I have yet to see a student who did not find a stricture the first time he introduced a bougie, because the sound often impinges upon the wall of the bowel between the folds of the gut; or, it may strike the uterus or prostate gland, or the promontory of the sacrum. There is always danger of a metal or hard-rubber sound penetrating the gut, especially in cancer or ulceration. Sometimes the socalled third sphincter, which is only a semilunar transverse fold of the anterior and the right sides of the rectum, about six to eight centimeters above the anus, may catch the bougie. Normally the bougie may be introduced with care to the middle of the sigmoid flexure. If the mesocolon of the sigmoid flexure is very long, the bougies may be felt on the right side and lead the examiner to think it had perforated the bowel.

The probe has no place in the diagnostics of rectal diseases and very little in the treatment, except in fistula. Even here its value is very limited.

Irrigations and injections are sometimes employed for diagnostic purposes, and are best accomplished in the knee-chest or dorsal position.

The speculum corroborates the digital findings, and aids in the diagnosis where the finger fails; but it by no means supercedes the latter. Resort to it is indicated where obscure hemorrhage, pain or discharge is an important symptom. The internal openings of fistulas may be seen, especially if the discharge escapes during instrumentation. Internal hemorrhoids usually drop into the instrument and are easily seen.

The decision as to which is the best speculum depends upon which one the operator is more familiar with. Each instrument is constructed differently, but the more rectal examinations one makes, the less he will use the speculum. The smooth blade bivalve causes much less pain than the wire blades, but it obstructs the field of vision and exposes only a small area at one time; and this speculum must, therefore, be rotated.

The cylindrical speculum permits of the most thorough work. With the patient in the knee-chest position and a speculum five inches long and one inch in diameter, the whole length of the rectum may be examined. Such a speculum is provided with an obturator to facilitate its introduction, which should be accomplished without much pain. When the obdurator is withdrawn, the air rushes in and dilates the bowel, and the whole rectal wall may be inspected by moving the introduced end about, at the same time gradually withdrawing the instrument. The mucous membrane directly in front of the speculum is flattened out, and can be viewed easily by

gently pushing the speculum up after the obturator has been removed.

By putting the patient under the influence of a general anesthetic, many of the obstacles to the examination are removed and the field may be explored thoroughly; the sphincter completely relaxes, pain is obviated, and in such cases it is well to be prepared to do any necessary surgical treatment in order to avoid a second anesthetic. When the patient is anesthetized, an ordinary flat retractor frequently makes a very satisfactory speculum. A cylindrical speculum ten to thirteen inches long may be introduced, and the sigmoid flexure explored; but, as the great majority of rectal troubles are near the anus, a short and wide speculum is preferable.

When the patient is in the knee-chest position, the chest should be well down on the table. All constrictions at the waist must be removed.

In many instances, owing to local disease or reflex nervous excitement, we find the sphincter abnormally contracted, making an examination very painful, and often impossible without some previous preparation.

An old-fashioned way of overcoming these difficulties was, to anesthetize the patient, and, with the thumbs introduced through the anus and then drawn forcibly out to the ischial tuberosities, to tear and strain the sphincters until paralyzed. Such a procedure is unnecessary, and should be relegated to the surgical scrap-heap.

Pneumonia: Some Clinical Lessons

By J. M. French, M. D., Milford, Massachusetts

EDITORIAL NOTE.—Every physician has interesting experiences which might be used to illustrate diagnostic and prognostic truths, and therapeutic possibilities—yes, even social and economic injustice. Doctor French has done us all a service by describing some of his own. May others be encouraged to give reports of their own work, especially in its practical aspects. Next month Doctor French will take up the treatment of pneumonia.

WHEN I began the practice of medicine, pneumonia was still quite commonly regarded as a strictly local disease—an inflammation of the lungs, and nothing more. The germ-theory was then in its infancy and was applied more to surgery than to medicine. I well remember the first case I saw and how it impressed me with the idea that some cases, at least, of pneumonia were caused by germs; were systemic infections, rather than mere local inflammations. The constitutional symptoms were more marked than the local ones, the course of the disease was insidious, the resulting prostration extreme, and the vitality of the patient soon exhausted. I have seen many similar cases since and have learned to dread them, for they nearly always are fatal. Since that time we have learned to consider all pneumonias as germ-diseases, but there still remains a great difference in the type of different cases.

Pneumonia in the Aged

Death from pneumonia is almost the natural mode of death for the aged: more old people die of pneumonia than of any other single disease. So well is this understood, that when a person past sixty is attacked by pneumonia recovery scarcely is expected. Experience proves, however, that there are many exceptions. Not infrequently do we find old people enduring and overcoming disease which would prove fatal to the ordinary young person. Especially is this true for pneumonia. The very fact that a person has lived to be sixty, seventy or eighty years of age is proof positive of a good degree of vitality and endurance. The man who is built to last a hundred years, or even three score and ten must, necessarily, possess sufficient vigor and resistance to disease to carry him safely through many a hard place in life that would carry off the average young person. The practical lesson is, never to despair of a pneumonia patient because of his age, provided other conditions are favorable.

An Accidental Death

I once had as a pneumonia patient, a widow of about seventy-five, whose physician was absent from town and who had selected me as his substitute. The attack was a fairly typical one and not exceptionally severe. The different stages came and went without giving me any especial cause for alarm. The crisis passed safely, the patient began to improve rapidly, and recovery bade fair to be uneventful. In a few days her lung was nearly cleared up, her mind was clear, her appetite was good, her strength was improving, and all the symptoms were favorable.

Under these circumstances I said to her one morning: "Now, Mrs. B., you are getting along so finely that there will be no need for me to see you tomorrow, but I shall come the day after." So, I went to my home and took the train for Boston, where I attended to some matters of business. When I reached home in the afternoon, the woman was dead.

Soon after I left her—perhaps encouraged by my favorable comment on her condition—the woman got out of bed and, saying how much better she felt, walked to the nearby window and looked out upon the garden (it was in the month of June, I think), remarked how fine the corn was looking and how fast everything was growing; she declared she felt better and was growing stronger every day, walked into the adjoining room and looked around for a minute, then went back and sat down on the bed. But, the effort had been too much for her; she was seized with a severe attack of heart failure and in a few minutes was dead.

Now, this was not strictly a death from pneumonia, but, rather, an accidental death. The patient had nearly recovered from her pneumonia, and had she kept flat on her back in bed until such time as I gave her permission to get up she would undoubtedly have fully recovered in a short time.

However, this lesson was not lost on me, and doubtless has enabled me to save a number of other lives since that time; for, I felt that I was in some measure responsible for not having warned her of the danger of getting up before she had the doctor's permission. And then and there I resolved that such a thing should never happen in my practice again. From that day to this, I always take care to lay down the law to all such patients: that they are not to stir off the bed, in some instances not even to sit up or raise the head, until I tell them it is safe to do so. When they act as though they thought I were "too fussy," I unhesitatingly tell them the story of the untimely death of Mrs. B., and that seldom fails to make the desired impression. Some people need to be soundly scared in order to keep them within bounds, and I verily believe I have saved some lives by telling this story.

A Walking Case

One morning a neighboring physician telephoned me to attend a patient for him while he was absent a few days. I went and found the man up and dressed and walking about the room and the house, although he had a temperature that was several degrees below normal, a lung that was solid, and a heart that was overburdened almost to the point of collapse. He had just passed the crisis and was at the point of death even under favorable circumstances. I found that through it all his physician had not been able to impress him with the seriousness of his condition sufficiently to keep him in bed, but that he had kept out of bed all the while, or at least for most of the time.

I tried my best to impress him with his danger, even telling him the gruesome story of Mrs. B., but this time to no avail. I gave him strict orders to go to bed at once and not to stir off his back until I gave him leave. He went to bed but did not stay there. A little past midnight I was sent for. I went, and I staid with him until he died, which was shortly after my arrival. The family told me that less than two hours before he passed away he got up from the bed and wandered out into the kitchen, and staid there for some time before he would go back to bed. I have labeled this a "walking case;" but it is only another illustration of the acknowledged fact that the chief danger in pneumonia is from failure of the heart, and not from the lungs directly.

A Death from Lack of Nourishment

I had for my patient, a few years ago, a man who had been my neighbor and friend for years. He was an estimable man, a good citizen, and a man of more than ordinary intelligence in many ways. He was an authority on matters of personal hygiene, writing many interesting articles on that subject. His two particular hobbies, however, were fasting and deep breathing.

My friend's constant cry was, "Eat less and breathe more." When anything was the matter with him (and this was not infrequently the case, notwithstanding his knowledge of hygiene) he treated himself by cutting off most or all of his usual scanty supply of food and indulging in the luxury of storing an extra supply of air in his lungs. Especially was this his favorite method of treating a common cold—an ailment from which he considered it quite disgraceful to suffer, but by which, of all things, he was frequently disgraced. If he did not succeed in breaking up his cold by fasting, he was optimistically confident that it was only because he did not begin the fasting early enough or did not carry it sufficiently far. As a natural result of these practices, he had the lean and hungry, half-starved look which is common to the fasting fraternity the world over.

One bitter day in midwinter the man came home from Boston suffering from a severe cold, and the attack did not yield to his usual fasting-treatment. Soon he came to me, as was his habit when fasting and physicking failed to relieve him, and I took him in hand. But he had no more resisting force than a piece of water-soaked brown paper. His system was below par, the result of lack of proper nourishment. He died, in a few days, of pneumonia and innutrition, a victim of his own vicious system, a pitiful example of an underfed and poorly nourished man, with no resisting power and no vitality, yielding where he should have conquered, dying where he ought to have lived.

What Fresh Air Will Do in Pneumonia

Another illustration. The patient was a feeble woman of between sixty and sixty-five. She had been growing worse all day, and it was nearly night when I was telephoned for to come the second time that day. When I arrived, I found she was still failing, and the friends were anxious to have me stay with her through the night, or as long as it might be necessary. It was in midwinter, but the rain was falling fast, the ground was covered with slush, and there was a brisk wind. Altogether, it was a thoroughly uncomfortable night outside and in. The sick-room was a small one, a corner room with two windows, each of them a double window made to keep out the cold. It was not an ideal room for a pneumonia patient, but we had not been able to find a better one.

The woman was more or less delirious, her pulse was rapid and feeble, and the breathing was oppressed, labored, and irregular. The heart was hard pressed, and the blood was not being aerified as it ought to have been. She was pulling for breath, yet, the air wasn't fit for her to breathe, coming, as it did, entirely through the door from the living-room, with not a breath from out of doors. But outside was the rain, and the wind, and the cold. It wasn't a bright prospect; however, the longer I watched her, the more I saw that the patient must have air if she was to have any chance to live.

When I had settled in my mind just what I wanted to do, I called her son, who was a man of intelligence, and explained to him that his mother had nearly all of one lung solidified, which left her only about half her usual breathing-capacity, so that she was in danger of dying for the lack of enough oxygen to purify her blood, and that, if we wanted to save her life, we must see to it that she had a good supply of the freshest and purest air we could possibly find for her. I then directed him to get tools and take out one of the double windows and let in the fresh air, even though it was raining hard. Of course, he questioned me and was anxious lest she should take cold and die as the result. But I told him—and he could see—that the prospect was that she would die as she was and that my plan would give her a chance for life. I also assured him that I should take all the responsibility and should stay and watch her as long as was necessary. So, we first put up a blanket between the sick woman and the window, to keep the wind and rain from blowing too hard upon her, and then took out the window-sash and let the air in, rain and all. And plainly it was to be seen by us all that in a very few minutes the sick woman began to breathe more easily, to look better, and to rest more quietly. It was the turning-point, and there was no question in the minds of any of us but that the fresh air was the remedy that caused the improvement. She recovered, and she is still living; and I have always given that open window the credit of having saved her life.

Supporting the Heart

I have learned through an every-day experience of thirty-six years to realize the great importance of proper measures for supporting the heart in all cases of pneumonia. I can recall many instances which have helped to impress this upon my mind, but not one that stands out above the rest. Indeed, it is a lesson which has to be learned by little and little, year after year. It is taught, not alone by the extreme case where life is barely saved, but by the average one, where the danger is kept far in the background by the same treatment.

I well know that the "authorities" tell us not to use heart-tonics until the heart begins to fail. My own experience, however, has convinced me that the best way to save the patient is, to avoid the beginning of any such symptoms by the careful use of the proper remedies in minimum doses early in the disease, rather than to wait until serious symptoms are manifest and extreme measures are necessary. Mind you, I do not advocate giving heart-tonics when there is no especial danger of heart weakness; still, everyone knows that this is the greatest danger in pneumonia, and that, when once the diagnosis of pneumonia is made, you need to look out for the heart even more carefully than for the lungs. And, if you know what is coming, why not prepare for it and, if possible, prevent

it? By following this plan, it is comparatively seldom that the severer forms of heart trouble manifest themselves.

I am aware that this is contrary to the teachings of the authorities; but, if we have no ideas of our own, there certainly is no reason why we should use up the pages of a medical journal in repeating the teachings of others. From many sources and from long experience, I have become convinced of the utility of this mode of treatment, and of its absolute freedom from doing harm under any circumstance. I know they tell us it is simply like putting a whip to a tired horse and merely increases the heart's weakness. Nevertheless, to me it seems only like giving food to keep up the strength.

Pneumonia Can Be Aborted

A considerable experience has proved to me that many attacks of pneumonia can be aborted by early and proper treatment. When I say, they can be aborted, I mean that a case which in its early phases resembles in all its clinical features an ordinary pneumonia, and which you have every reason to expect will, if left to its natural course, go through the usual stages of that disease, with the chance of a fatal result, many times may, by prompt and active measures, be made to end its course without going through the usual stages, and, so, without the consequent danger to the patient. Of course, there are those who claim that, unless the disease does go through the three classic stages of congestion, consolidation, and resolution, it is not pneumonia. If this be granted, then, of course, pneumonia can not be aborted. It is not worth while to quarrel about a mere difference in the way of expressing an idea. The fact remains that the thing can be done, and much serious illness saved, by whatever name you may please to call it.

There is no patent process by which this can be done, however, no one method which can be depended upon, to the exclusion of all others. But there are a number of recognized methods that will produce this result under favorable circumstances. Of course, not all incipient attacks can be aborted, even by the earliest and most approved methods of treatment; and the reasons why this is so may be summed up as follows:

1. There may be a lack of vitality in the patient, resulting from age, debility, dissipation or native lack of vigor; and, as a result of this, the system does not react properly to any method of treatment.

2. There may be an unusual intensity of the infection; that is, the attack may be an extremely severe one, owing to the toxic action on the system of the pathologic cause of the disease, so that the vital forces are overwhelmed by the first onset of the disease.

3. The treatment may not be begun sufficiently early, or it may not be the proper treatment for that purpose, or it may not be carried out with sufficient vigor and thoroughness.

These are the reasons why some cases are aborted, while many are not, and can not be, in the present state of our knowledge. It is probable that the percentage of successes may be increased by a careful study of the peculiarities of the patient, the nature of the disease, and the effects of the different forms of treatment.

The Importance of Good Nursing

In the treatment of pneumonia, especially after the disease is fully developed, good nursing often is of quite as much importance as is medical treatment—and I do not know that I should quarrel with anyone who might claim that it was even more so. The doctor who has to treat a serious case of pneumonia without having the assistance of a skilled nurse is laboring under a great handicap.

Mrs. G. was a woman past sixty, and I think she was the sickest person with pneumonia of any patient I ever had and who recovered. For twenty-four hours following the crisis she lay apparently at the point of death, with symptoms so serious that I despaired of her recovery. This was in the early years of my practice and before the days of trained nurses in country practice. But I had the advantage of having as a frequent consultant a neighboring physician who had the reputation in all the country around of being an excellent nurse—which meant, I found from my experience with him, that he knew how to look after all the little things that make the difference between life and death. He proved it here. Every day when he came he would go over, with me and with the nurse, every little detail of the case with infinite care and pains, and would give the most minute and explicit directions to the nurse for the care of the patient from hour to hour. I think it was his care, more than my treatment, that saved the patient.

This reminds me that I know of no better way for a young doctor to become a good physician than to call to his aid, in difficult cases, the older men in his neighborhood who have gained a reputation for special skill and success in certain lines, and to study their

methods. Certainly, I learned in this way many of the most important and practical lessons of my life in the care of the sick. I can look back to this doctor and that one all through my earlier and later professional experience and count up the good things I have learned from each of them.

The Dictum of Osler

William Osler is perhaps the greatest medical teacher among English-speaking physicians. Nevertheless, I believe that the acceptance of his dictum, that "pneumonia runs its course uninfluenced in any way by medicine; it can neither be aborted nor cut short by any known means at our command," is fatal to all progress or great success in its treatment. Over the door of every school of medicine which teaches this dictum, should be written in letters of blood,

"All hope abandon, ye who enter here."

(To be concluded next month)

Pneumonia: With Special Pointers on Treatment

By J. H. Bristow, M. D., Portland, Oregon

IN ORDER that we may be of immediate and practical value to our patients, it is necessary that we have in mind, subject to immediate call, a vast fund of knowledge concerning the elementary parts of the science of medicine. Personally, I find that my most difficult efforts consist in keeping informed concerning the little matters that deal with the everyday problems that arise. Believing that we sometimes loose sight of the little (great) and essential values in our more abstract reasonings, it is my desire, in considering pneumonia, to present only some of its more elementary aspects. I shall recite briefly some of the symptoms and a little of the pathology, and shall undertake to show valid reasons for the use of calomel, aconitine, gelseminine, and digitalin in the treatment.

In nearly all descriptions of the onset of pneumonia, especially the lobar form, it is said that the disease begins with a chill of very great intensity. This symptom is, indeed, met with in certain parts of the country; however, in certain other localities pneumonia begins gradually, with no chill, but, with a growing prostration and with increasing symptoms of involvement of the lungs. In certain localities, the onset is stormy, sudden, violent; in others, taking several days to develop, it is like the fire that smolders for hours before bursting into raging flame. It is important to note these facts; for, they bear upon certain points of the treatment. In all the Pacific Coast region, the onset rarely is stormy; instead, it is a matter of several days, at first only a small spot being affected, this spreading with greater or less rapidity, until the entire lung-tissue is involved.

The rise of temperature corresponds, usually, with the manner of the onset; it being sudden and violent on the one hand, and, on the other, advancing more or less slowly.

From the first, especially in lobar pneumonia, there is likely to be pain in the side, owing to involvement of the neighboring pleura. The location of the pain is no particular indicator as to the location of the lung trouble, inasmuch as the pain is likely to be felt at a special point, regardless of the part of lung diseased; that is, at the anterior axillary line, at about the sixth or seventh rib. Even in apical pneumonias, the pain may be felt at this point. It is made worse by cough as well as by respiratory movements.

In basic pneumonia in which there is involvement of the pleura of that region, it is important to remember that pain in the abdomen may be violent and may simulate certain abdominal diseases. We are all aware of the fact that indifferently examined patients have been operated upon for appendicitis because of pain and tenderness in that region and very long (or short) appendixes have been removed, only to have a (supposed) postoperative pneumonia promptly develop. The appendix being now absent, we have time to make a complete examination—and, therefore, a complete diagnosis.

Some Special Symptomatology

Headache quite infrequently is a troublesome symptom, while also the bones feel painful, as in grip.

Fever always accompanies the acute forms of pneumonia, and its degree of severity is a

fairly good indicator of some of the things that are going on. In apical involvement, the temperature will be very high, even though the involvement be small. In children, when the attack is ushered in with a very high fever, and possibly accompanied by spasm, one hardly will miss a guess that the apex is affected. This location accounts for the violent delirium in many instances.

While cough is a constant symptom in pneumonia, it is well to remember that the aged, children, drunkards, and those debilitated by other exhausting diseases may not cough. Cough is a variable symptom, easily induced by other conditions—as in whooping-cough, chronic bronchitis, asthma, and so forth.

In the early part of the attack, the pulse is rapid and full; later, it may be even more rapid, but looses its fulness. The pulse gives us a fairly good hint of what is going on in the circulatory apparatus; for, the blood pressure, during the early part of the disease, is prone to be somewhat raised, although it soon shows a decline below the normal. A fall in tension that is sudden and to a point at or below 100 mm. of mercury, indicates that collapse and death are imminent; a gradual fall to a point below 100 mm. is a matter of sinister portent. There is no doubt but that, whenever possible, the sphygmomanometer should be at hand, and that the nurse should understand its use. This instrument, of such great value to us in certain other diseases, should have its prime usefulness in pneumonia fully recognized. Whenever possible, a constant record of its readings during an attack should be kept. It will indicate the course the disease is running and point the way in certain vastly important matters in the treatment.

The tongue, in pneumonia, is coated; constipation is apt to be marked; the breath is more or less offensive; the urine is scanty and high-colored. "The urine contains indican in many cases," says a famous textbook. Personally, I am of the opinion that the author of that book missed his chance when he failed to enlighten us more fully regarding the significance of indican in the urine during an attack of pneumonia. The total acidity is apt to be high; a trace of albumin may be found; also, perhaps, a few casts. In short, the urine indicates with fidelity the fact that plenty of poisonous fermentation toxins are being formed within the bowel; which toxins surely are going to be decidedly detrimental to the patient as long as the fermenting contents are allowed to remain. I do not ignore the fact that poisonous toxins are being formed elsewhere also; but, then, they can not possibly be handled as long as the load of refuse keeps coming along from the bowel.

It is customary for a man to take off his coat before he fights; ships are "stripped" for battle; even automobiles are relieved of all useless impedimenta before a race is run. Old, rotten feces within the bowel, toxins, fermentation products, indicanuria, high total urinary acidity, foul tongue, bad breath, fever and pain are, surely, serious impediments for one who must battle with that grim enemy, pneumonia.

A Hypothetical Case as an Illustration

Let us suppose that we are dealing with a typical attack of lobar pneumonia. There is chill, pain, cough, fever, rapid pulse, initial rise of blood pressure, with its subsequent fall, quickened respiration, and so on. On the Pacific Coast, we likely shall not encounter the initial chill, but, rather, a slow beginning, with a diagnosis deferred until the second or third day. In place of the stormy onset, with the patient flushed and suddenly very sick, we have a gradual appearance of these factors; the blood-pressure phenomena appearing more slowly—that is, extending over a greater length of time.

Remembering the efficacy of bacterins, fresh air, good nursing, feeding, besides many other essential measures, our thoughts turn to those drugs that are to meet the main difficulties besetting the patient. Even though we possessed a specific, we should find use for other drugs of a certain kind. In diphtheria, for example, even though we know that antitoxin will cure in nearly every case, we do not sit idly by, leaving the positive drug indications unfilled.

In lobar pneumonia, there is, first of all, severe congestion of a given area of lung-tissue. It is quite to be inferred, and the symptoms point to the fact that there is more or less congestion of all the lung-tissue. Indeed, the latter condition may proceed to such a point as to cause almost immediate death. At first, there is a diminished amount of blood at the body-surface, which may account for the chill. Increased tension occurring during the early part of the attack will, naturally, produce congestion in the head, but a diminished amount of blood within the abdomen; except the known susceptibility of certain abdominal organs to congestion during high tension (accounting for kidney involvement). Later in the course of the attack, the picture changes very materially.

I wish to make a point of this matter. It is wrong to assume that one falls ill of pneumonia, and has it right through, and gets well or dies, according to the severity of the attack.

An examination of events as they pass will reveal the fact that pneumonia has its three stages as clearly as one could wish. I do not refer to the three stages of pathology at all; for, while symptomatic conditions may possibly follow the pathology somewhat closely at times, the fact remains that symptoms exhibit certain vital changes quite irrespective of the stages of pathology.

Now as to the matter of circulatory tension. At first tension will be raised for a short time —during one, two or three days. Later, it is lowered, possibly to the danger-point. This occurs without reference to first and second pathological stages. Why is this? Because at first the heart is able to do the work demanded of it and to keep up the increased pressure; later, its weakening muscle simply can not hold the pace. This fact accounts for the majority of deaths occurring from this disease.

To be sure, diminished tension during the later and during dangerous stages of the attack has an additional cause in a relaxation of the peripheral vessels, owing to the action of toxins, and, doubtless, to other causes as well, such as general exhaustion. At this time, examination of the surface will show that the flushed skin of the early part of the attack has given way to paleness and clamminess; and general conditions will announce the severe difficulties under which the vital powers are laboring.

About the Treatment

In treating one who is sick, anything that will have a tendency to restore normal conditions will have the effect of curing or mitigating or shortening the attack. I quote the aforesaid textbook again: "No specific having been found, there is [in substance] nothing to do." And that pronouncement, let me say, has caused me to quit reading that book. It's all bad enough without such foolishness. I have set forth sufficient facts concerning the urine in pneumonia to warrant treatment, even though there were no further indications.

The component elements of calomel liberated within the digestive tract act upon the secreting cells of the liver. This drug also has the property of softening and expelling the contents of the bowel. It has a certain degree of antiseptic power within the bowel. Its action upon the kidneys is of a favorable nature. So well known is the beneficial action of this drug that I shall be content to say that, were the tongue not furred nor the urine showing any abnormality, also the bowels freely open and the patient devoid of headache and other main signs of toxemia, then the dose of calomel might be omitted.

It will not hurt to reiterate that this dose of calomel should be not too large, that the powder must be finely subdivided, and that it should be followed by a laxative saline. Also, that in hot weather the dose should be larger for a given individual than in cold weather; this for the reason that the liver is apt to respond but sluggishly during hot weather.

For many years the medical profession has been using aconite in the treatment of pneumonia. There is no doubt but that harm has been done at times by the indiscriminate and illogical application of this drug. Nevertheless, there are reasons why aconite has done much good for those ill with pneumonia, and more especially after the undependable tinctures were replaced by the active principle of the root.

Aconitine in moderate medicinal doses exerts no appreciable effect upon any part of the economy save the circulatory apparatus. It slows the excited circulation by its stimulating effect upon the vagus center, while by direct action it quiets the excited heart-muscle. Arterial tension is reduced chiefly because of the sedative action upon the heart. The same dosage will exert a sedative effect upon the respiratory movements, and, it would seem, the more hurried the respiration, the more pronounced the effect. Aconitine dilates the surface capillaries, thereby reducing fever, through increased radiation. It increases the urinary flow. And, for the benefit of those who inveigh against giving anything that will "depress" the heart, I will say that aconitine, even in large doses, is eliminated from the economy in about three hours.

Sthenic Pneumonia, and Aconitine

Now, if I have induced you to read thus far, suppose you stop for a moment and meditate upon a sthenic pneumonia or any pneumonia attended by an initial increase of blood pressure.

It is argued that in pneumonia one should never, in any case, give that which has a depressing effect upon the heart-muscle, for the reason that later on the heart will need all its strength. They are in a class with those who believe morphine to be a heart depressant.

Let us suppose that it were one's leg-muscles and that he is going to climb a mountain.

Were one to see him running for ten miles before he begun the climb, one probably would counsel him to conserve his strength by walking, or even crawling, or, if possible, accept artificial aid and ride in some vehicle. And I'll wager there are people who would say he could never make it, for while he was riding his leg-muscles would "all shrink up." Aconitine is eliminated in three hours. Properly given, this alkaloid will greatly mitigate the labor of the preliminary run before the real climb has begun.

With due understanding of circulatory conditions, there is every reason why aconitine should be a tower of strength in bringing the patient to the second, and most serious, stage of the battle. At this time I am not permitted to discuss its value in later stages of the disease.

I have intimated that pneumonia presents a different aspect in the Pacific Coast region. It does. So different, indeed, is its appearance here that we depend, not so much upon aconitine, as we do upon gelseminine for quieting the fever and excitement. Here, pneumonia appears slowly. The disease "blooms out" during several days, rather than in but a few hours. The patient suffers distress and wakeful nights, cough, and growing anxiety. Blood pressure may be elevated but little, if any; usually being lowered from the start. Without entering further into that matter, I will say that we find gelseminine of very great value. Our homeopathic friends understand full well the value of this measure, and they find this drug extremely useful.

In speaking of three symptomatic stages in pneumonia, I have in mind a first stage—when the blood pressure is raised; a second, when it is lowered; and a third, when it returns to normal.

The Role of Digitalis

The time soon arives when the blood pressure begins to fall, the pulse quickens, temperature falls a little, and general conditions assert the gravity of the process going on. Blood pressure falls mainly because of weakening of the heart-muscle, benumbing of the nerve-centers by toxins, and dilatation of the peripheral vessels from the same cause.

In order for the blood to circulate properly, all of it must go freely through the pulmonary vessels, and all of it must go freely through the general circulation—including the portal system. The obvious difficulty of forcing it through the choked-up lung explains a vast amount of the causes of circulatory troubles. One obstruction is just as bad as the other. We might here reflect upon the effect of a dose of calomel upon the portal system.

It is my opinion that, if one can but support the heart until the fires of disease burn down, he will have done the chief thing toward bringing about a favorable termination. Any drug that has a tendency to enable the heart to overcome the obstacles set in its way should be given until its positive effect is shown.

Dosage is the "foolest" thing we do. Along comes a book, and it says you may give just so many, or about so many, drops of digitalis to a grown-up person. Foolish direction! Remembering the known difficulty of securing potent preparations of digitalis, one should select the active principle, and give it in just one dose; which is, until its effect is shown. In pneumonia, it should be begun at near the maximum dose (given by mouth or hypodermatically, according to circumstances), and be promptly increased when no effect is shown.

In view of the ideas set forth, digitalis seems ideal for meeting certain conditions. It has no effect upon the nervous system. It increases arterial pressure, slows the pulse and increases its wave; it stimulates the heart-muscle and prolongs the diastole, which is the period of rest. Increase of blood pressure is assisted by its action upon the vasomotor center and walls of the vessels. while the increase of the pulse-wave is due to complete contraction of the heart.

In medicinal doses, digitalis has no deleterious effect upon the body. It does not let the patient down when it is discontinued, for, a permanent "tonic" effect will result when it is given for any length of time.

Digitalis should be given during the second stage of pneumonia. I have said at another time, and I repeat now, that it is a therapeutic crime to wait until the patient shows marked need for the drug before it is begun. One should see ahead, by pulse rate, temperature, sphygmomanometer readings, uranalysis, and so on, that the time is coming when this drug will be needed, and meet that time by having its effect somewhat manifest when the necessity does appear. This will advance the beginning of defervescence; and even those who pin their faith upon the bacterins should remember that all will be better if the blood is sent around in a way resembling as nearly as possible the normal.

Digitalis (or its glucosidal representative,) is a drug of great value, easy to use, practically free from harmful possibilities, and leaves no bad after-effects.

In conclusion:

Rid the system of toxins, by the employment of calomel and its adjuvants.

In sthenic cases, give aconitine to effect.

On the Pacific Coast, gelseminine will be found of value oftener than aconitine.

Digitalin or digipoten should be used according to pulse and blood pressure indications.

No one should overlook the incomparable value of small doses of morphine for the relief of cough and pain, nor, also, the necessity of careful feeding and the value of pure, fresh air.

It is not here intimated that one should use no more than four remedies in the treatment of pneumonia; rather, one should find a reason for every remedy prescribed. And, gentlemen and brothers, if we always felt perfectly well grounded in all we do in the treatment of the sick, there would be less cause for the editor of this journal to write editorials intended to wake us up to the duties of our high calling.

Diagnosis*

By Arthur M. Corwin, A. M., M. D., Chicago, Illinois
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OF PROPHYLAXIS, diagnosis, and treatment, the greatest, perhaps, is the first; but the proverb says the first shall be last, or words to that effect, and, verily, we have but lately entered upon a domain where conservation and systematic prevention may save the race and add to its comfort and efficiency.

But, great as is prophylaxis and great as is the need of treatment of disorders that have not been prevented, to know what is the matter now, diagnosis. is the key to relief. Long live diagnosis—most important in the curriculum, whether of medical school or university of life. The slogan is: "Find what is the matter and then go after it."

When we enter upon the practice of medicine, we exemplify the work of both detective and court: as diagnostician we identify and catch the criminal; as therapeutist we fine or hang him according to his merits. Let us beware lest we hang, when good advice or a fine is all that justice demands; and, on the contrary, what an injustice to write a prescription where only prompt use of the knife can save. As the court may not inflict punishment upon the thief uncaught, neither can the doctor treat a disease which he has not found. Sherlock Holmes is a synonym for that fundamental trinity—keen observation, correct reasoning, wide experience—upon which clinical medicine is built. Without them, the doctor is a mere pedler of pills, dickering with symptoms while the causative disease gets away with his patient. The animated pharmacopeia, and the ignorant, thirsty scalpel, symbolic of low grade doctors, are equally dangerous, unless therapeutical learning and surgical enthusiasm are coupled with clinical acumen and fortified by conscience. To quiet pain with morphine while the appendix continues to infect the peritoneum, to dilate a sphincter for the cure of asthma when nasal polypi are the cause, is bad business and worse practice.

Diagnosis deals with facts that stand, while the hypotheses of empirical therapy pass. Diagnosis—the art of finding out what is the matter and where—is the room in which the doctor lives. Upon the one side opens the window of causation, upon another that of prognosis, and upon a third opens the door of treatment. Symptoms are mere straws which show which way blows the clinical wind of disease; empirical medicine takes the straws for the wind itself; hence, its dictum—for every symptom a drug. To know thoroughly the condition of the patient is our primary aim; to label the condition back of the symptom complex is incidental.

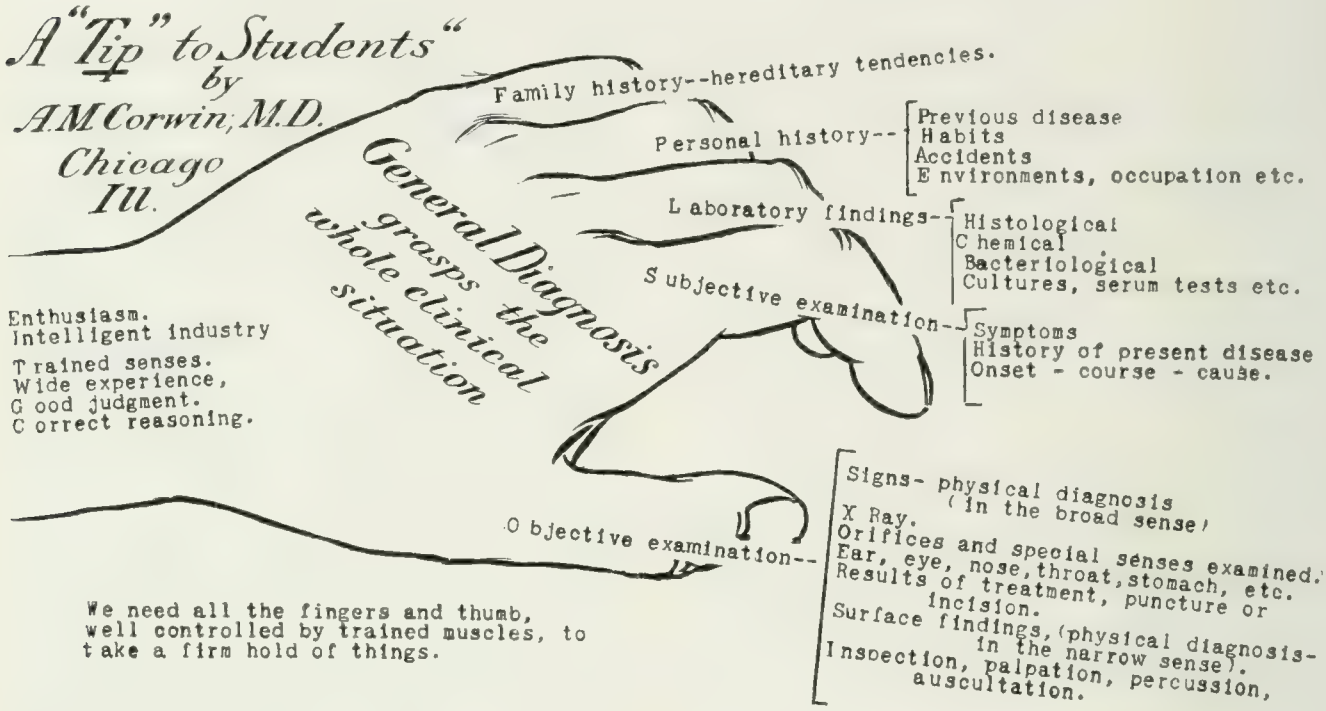
A Symbol of Diagnosis

The human hand in the act of seizing is a fine emblem of general diagnosis, which, to know thoroughly, seeks to grasp the entire field of clinical facts. There are five definite groups of data, the facts in each group so related that the generic idea covering them may be assigned to each digit according to its efficiency. We say *human* hand, for, be it remembered, the thumb of the monkey is rudimentary. Although its fingers are active, no simian's hand grasps, and it would be better if it had a strong, well-proportioned thumb. In the hand of man, on the contrary, the thumb is the dominant digit, and it is equally vital from our symbolic point of view.

*Addressed to students, College of Physicians and Surgeons, Medical Department, University of Illinois, and reprinted from *The New York Medical Journal*.

The facts of family history are least important in determining a patient's lesion and, therefore, are naturally assigned to the little finger. But, cut off this finger, and how handicapped is the grip. So, hereditary tendencies are often of considerable significance in sizing up difficult cases, where every bit of light is needed.

The data of personal history, of next importance logically, fall to the lot of the third finger; their value in diagnosis is obvious. The middle digit, strong and prominent, may be safely dignified with the contributions of the laboratory, extremely valuable in the diagnostic work of up to date, modern medicine. The microscope, test tube, and culture



medium, once strangers to scalpel and prescription, are today their boon companions. The laboratory opens directly out of the sickroom. But, as the index finger most easily cooperates with the thumb in picking up a thing, so are the sensations of the patient leading pointers to his trouble. They are, therefore, the property of the first digit. It is the sufferer's symptoms that are wont to focus our attention upon the seat of his disease, but distant complications or incidental lesions must be discovered, perhaps through other channels.

Most powerful of all the five is the thumb itself, as has been said, and upon it falls the chief responsibility. Amputate all the fingers, and the thumb, still opposed to the palm, makes a very respectable prehensile showing. The patient, deaf, dumb, and unconscious, without friends, may fall into the hands of the skilful physician, who, by the aid of his own trained senses, is able to make out a case. In other words, if all means of diagnosis were to be denied us save one, we should naturally reserve objective examination as the most essential.

We have chosen the symbol of the hand because it illustrates so perfectly the five groups of data with which the examiner must deal if he would find out what is the matter with his patient, and, as the hand is useless without active muscles and tendons, so are these avenues of information worthless unless behind them are enthusiasm and active interest in the work in hand. Without these, no man may accomplish his full share of usefulness. Industry, too, is essential, but haphazard activity may be largely misdirected. It is intelligent, wisely directed effort that counts. The senses must be educated; the eye to see, the ear to hear, the hand to feel. It is astonishing what the blind man can do by concentrating his attention upon the senses of touch and hearing. The same power lies latent in each of our senses, waiting to be aroused by use.

It goes without saying that wide experience alone can give the facts necessary for safe deductions. With all these qualifications, the physician may be encyclopedic in his knowledge, but extremely impractical and unsuccessful in his profession without common sense and correct habits of reasoning. A word to the wise is sufficient.

When the air of civilized centers shall be purged of smoke, dirt, and noxious gases, our

houses properly ventilated, and a vacuum cleaner installed where dust rag and broom now hold sway; when our drinking water shall be filtered, our milk certified or sterilized, our food protected from the selfishness of adulteration; when the mosquito has been drowned in Standard oil, and the tick, louse, bed bug, and flea—those carriers of preventable diseases—are banished, or at least rendered harmless, and the last house fly has been everlastingly "swatted"; when temperance shall sit at every board, not as a guest, but as a member of the family; when worry is cast out of the window; when habits shall be drugless; when one standard of morality shall be recognized and enforced for both sexes alike; when honor and purity shall reign in society; when marriage shall be based upon mental and physical fitness, comradeship, and mutual love; when religion shall be the expression of universal brotherhood under one God; when warring dogmas shall cease to growl from the pulpit and snarl from the pews, and bitter, narrow sectarianism shall be buried in the potter's field without flowers, crape, or marble to mark the lonely spot; when labor and capital shall clasp hands in fraternity; when graft is divorced from public office; when good citizens unite in politics; when big business has grown a conscience and truth-telling becomes popular; when women are given the franchise; when some hundred other desirable things shall be realized through the effort of prophylaxis and conservation, then, in that millennial day, rescued from innumerable preventable diseases and distresses of mind, body, and body politic, mankind may concentrate attention upon what is left to find out and correct, if there is anything.

A Study of Atropine

By H. Hamilton Redfield, B. S., A. B., M. D., Chicago, Illinois

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THE presence of atropine in atropa belladonna was first made known by Mein in the year 1831, but it was not until three years later—1833—that it was isolated by Geiger and Hesse.

Medical history teems with descriptions, both botanical and pharmaceutical, of the mother-plant, belladonna. Matthiolus, he of ancient times, alludes to it under the title bestowed by the Venetians, who called it herba belladonnæ; a name chosen because the ladies of the Venetian court made use of a distillate of the plant as a cosmetic—*Bella donna* meaning, beautiful lady.

Sometime about 1504 a book, entitled the "Grand Herbier," appeared in Paris, in which is found the first authentic account about the belladonna herb as used medicinally, although there is strong evidence with which to support a hypothesis that the term solatrum minus used by Saladinus in 1450 refers to this drug-plant. In 1760, Amoreaux, of Paris, gave a very concise description of its effects when taken internally. Subsequently (1776) Daries, of Leipzig, and Muench of Gottingen, in 1783 and in 1785, wrote very comprehensive treatises on its uses and effects in medicine. In 1542 the German botanist Leonard Fuchs wrote (with accompanying drawing) on the toxicology of the plant, under the name of Solanum somniferum, giving a full and complete identification of its poisonous properties. Also, in 1677, J. M. Faber, of Augsburg, wrote on its poisonous action.

The first authentic study of the mydriatic action of belladonna is found in a work by Himlay, of Paris, in 1802. Among the homeopathic writers, belladonna has, from the first, been accorded great prominence, ranking as one of their leading remedies. In the early American works of the regular school, we find it commended in the Pharmacopeia of the Massachusetts Medical Society in 1808, in Thatcher's Dispensatory in 1821, and in the Eclectic Dispensatory issued in Philadelphia in 1827.

From a physiological standpoint, the most complete treatise, in all probability, ever penned is the one by Dr. John Harley (co-editor of *St. Thomas Hospital Reports*, 1874–76, London), in a work entitled "Old Vegetable Neurotics" (1869).

Physical Properties of Atropine

Pure atropine occurs in the form of colorless or white, glossy, acicular crystals, is odorless and of a bitter and acrid taste. It has a melting point of 113.5° C. (236.3° F.), according to Ladenburg (1880); of 115.5° C.

(240° F.), according to E. Schmidt (1881). When carefully heated, it volatilizes at 140° C. (284° F.), partly unchanged; but when raised to a higher heat it is completely decomposed, leaving no residue. According to von Planta, atropine is soluble in 300 parts of water, while Geiger claims for it a solubility of 1 part in 500 parts of water, and the U. S. Pharmacopeia gives its solubility as 1 part in 500 parts of water at 15° C. (59° F.), or as 1 : 30 in continuously boiling water (Geiger and Hesse). It is freely soluble in alcohol, and dissolves in warm oil of turpentine. Geiger and Hesse state that it is soluble in 63 parts of ether, while Brandes places the ether solubility at 1 : 36.

Atropine is strongly alkaline in reaction, and neutralizes acids, forming crystallizable salts. Solutions of the salts of atropine are not precipitated by platinic chloride, except when in a very concentrated state.

The almost complete insolubility of atropine makes its use in the pure form prohibitive, and it is therefore generally employed in the orm of the soluble sulphate.

Physiological Action

The injection of 1-20 grain of atropine causes, in about twenty minutes, an increase in the pulse rate, from 72, to 110; the mucous membranes of the mouth, throat, and nose become dry, and mydriasis occurs. The sight becomes indistinct, vision blurred, grotesque hallucinations occur, and in some instances delirium; there is a sensation of giddiness and an inclination to sleep. In some cases, especially where there is a marked idiosyncrasy to the drug, there may be an erythematous eruption on the skin, closely simulating the rash of scarlet-fever; occasionally there is an erythematous and pseudo-erysipelatous swelling of the face and neck.

Children seem to bear atropine much better than do adults, and several remarkable recoveries from the toxic action of this alkaloid have been reported. An infant of nineteen months swallowed about 3-4 of a grain of atropine sulphate. In half an hour the cutaneous surface became bright-scarlet, tonic spasms occurred in the limbs, with dominant rigidity, and especially rigid flexion of the thumbs and great toes. As in other cases of poisoning, delirium, hallucinations, dizziness, drowsiness, and dilated pupils occurred. However, recovery took place in twenty-four hours.

Sometimes the pulse becomes very rapid, respiration hurried, and then, owing to an accumulation of mucus in the air-passages, it becomes interrupted or suspended; there may be dysphagia, convulsions, retention of urine, and, after recovery, desquamation of the cuticle.

A weak, sickly child of six years recovered in twenty-four hours from a dose of 1-2 grain of atropine, and another of three years, after as large a dose.

The author once observed the case of a nurse in a Chicago hospital who took by mistake 3 drams of fluid extract of belladonna. Aside from a display of the drug's full physiological action, there were no untoward symptoms, and recovery occurred in thirty-six hours, the girl returning to her duties.

There have been cases reported in which 1 1-2 grains of atropine did not prove fatal (*Med. News*, Dec., 1881, p. 758). An adult recovered after a dose of 9-10 of a grain given hypodermically (*Med. News*, May, 1881, p. 307). Sink (*Jour. Am. Med. Asso.*) reports a case of extreme atropine poisoning from the instillation of the drug in ophthalmic work.

On the other hand, a case is noted in which an excessive amount was applied dermically (over a blistered surface), in which, in addition to the above mentioned symptoms, there were dyspnea, dysphagia, infection of the conjunctiva, and choreic movements of the limbs; the pulse grew thready, and death occurred in two hours.

Sometimes a marked degree of cutaneous anesthesia occurs, and to this may be attributed the inability of the person to direct the movements of the limbs or grasp an object.

A man was found dead after taking 2 grains of atropine, and another died as a result of the application of atropine-ointment to a denuded surface. The symptoms consisted of agitation, followed by coma, quick and thready pulse, muscular rigidity, interrupted respiration, convulsions, and coma.

Usually in atropine poisoning the post-mortem findings are significant. The skin is discolored, the lungs and right side of the heart are distended with blood, the left side less so or empty, the brain congested, and the blood usually uncoagulated.

Under atropine, there is a primary slowing of the heart, which soon becomes very rapid and vigorous, the pulse being doubled in rapidity; coincident with this, there is an increase of blood pressure.

This action of the alkaloid is produced by a stimulation of the cardiosympathetic apparatus and a paralyzing of the intracardiac inhibitory ganglia, thus producing a stimula-

tion of the accelerator apparatus, while lessening inhibition. Note here the difference between atropine and digitalin, which latter increases both phenomena. At first, there is general vasomotor stimulation, with increased blood pressure; but afterward, by overstimulation, an inhibition occurs, the vessels relax and blood pressure is greatly lowered. Complete motor paralysis follows, then delirium, stupor, and finally death from asphyxia.

Local Action of Atropine

The pupils are dilated by atropine, both if used locally or systemically; the drug stimulating the end-organs of the sympathetic nerves and paralyzing those of the motor-oculi muscles, thereby increasing the contractile power of the radiating fibers of the iris and decreasing the sphincter action of the circular fibers.

While the foregoing offers a very excellent physiological explanation of the mydriatic action of atropine, yet, it does not suffice when we contemplate mydriasis occurring after a local application in the eyes of cadavers. In a series of experiments conducted by the author in the summer of 1912, it was demonstrated that atropine caused dilation in the eyes of cadavers, in some instances as long as one week after death; and the mydriatic action of the drug was also manifest in fresh-killed bullock's eyes, as also in the eyes of sheep, removed from the carcass. There must, therefore, be some local action with which at present we are not acquainted.

Atropine also paralyzes accommodation and lessens intraocular pressure. Donders has shown that 1-700,000 grain of atropine will produce mydriasis.

Under atropine, the brain is congested, a busy delirium being produced, and hallucinations with mental disorders, due to a selective action on the cells of the gray matter.

The spinal cord is stimulated from the third cervical to the tenth dorsal vertebra, this resulting in paralysis of the motor nerves, both central and peripheral; power being lost in the lower extremities first.

There is a slight impairment of sensibility, but there is no change in the irritability of the muscles.

Respiration becomes rapid, and there is a rise of body-temperature.

A. Zeller has shown that the movement of the blood-corpuscles is checked when blood outside of the body is brought in contact with a 1-percent solution of atropine.

The alkaloid is absorbed with great rapidity from the intestinal tract, but only slowly through the skin. It is eliminated in greater part or wholly unchanged. In fatal cases of poisoning, atropine has been recovered from all the tissues of the body, and S. Fabini and O. Bonanni have detected its presence in the milk. Its chief avenue of escape, however, is through the kidneys; hence, atropine poisoning may be easily diagnosed by simply dropping some of the urine of the patient into the eye of any domestic animal; then, if mydriasis is produced, atropine is the toxic agent involved.

Atropine exerts a depressant action on the nerve-ending in the secretory glands, thereby making impossible the passage of impulses to the gland, the gland becoming inactive and devoid of secretion, through the temporary cessation of physiological function. This action of atropine applies to nearly all the natural secretions, the exception being, the pancreatic juice, the urine, and the bile; these secretions not being influenced or controlled by a special secretory nerve, are not affected by atropine.

The total amount of gastric juice in the stomach is decreased by atropine, as well as the percentage of hydrochloric acid. In large doses, it decreases peristalsis, while in small doses it increases peristalsis. Combined with purgatives, it prevents griping, but the manner in which it accomplishes this is at present unknown.

Upon the central nervous system, atropine possesses a complex action. Large doses cause restlessness and excitement, then talkative delirium and, finally death, preceded by stupor and coma.

In all probability the first of these effects is due to cerebral stimulation, especially the motor area, and the latter one to cerebral depression—first of the controlling centers, and second of the psychic centers.

Therapeutics of Atropine

The chief uses of atropine are as follows: (1) To relax spasm. (2) As a check to excessive secretions. (3) As a vasomotor stimulant. (4) As a mydriatic. (5) To paralyze accommodation. (6) To allay peripheral irritation. (7) To stimulate peristalsis in the intestine. (8) To impress the cardiac nervous mechanism. (9) As an antagonist to certain poisons.

As a relaxant, atropine possesses little value in the treatment of general convulsions when of cerebral or spinal origin, but in cases of local spasms produced by peripheral irritation it is of great service. This quality constitutes it one of our best remedies in the

treatment of pertussis and laryngismus stridulus.

It is a valuable adjuvant to morphine in the various colics—renal, biliary, and intestinal—and should be given freely, to guard the morphine and relax the spasm.

It can be exhibited with good results in asthma, where in combination with glonoin it produces prompt relaxation.

The author has used it extensively in treatint incontinence of urine in children, when it is due to vesical hyperesthesia and spasm of the sphincter. Here, it should be given until a sensation of dryness appears in the throat or the pupils dilate.

In torticollis, intramuscular injections of atropine have been advised, and numerous cases of prompt relief by this treatment have been reported.

In the form of suppositories, it is effective in cases of spasm of the anal sphincter, also in dysmenorrhea.

It is indicated in those who are of a bilious, lymphatic, and plethoric constitution; women and children with a delicate skin. When in good health, they are jovial and entertaining, but when in poor health they are delirious, violent, and threatened with convulsions. The face is red, conjunctivæ are congested, eyes staring, and pupils dilated. The carotids throb, and the pulse is free and bounding.

During the early stages of tabes dorsalis, it is sometimes plainly indicated. The carotids pulsate, pupils are dilated, there is ptosis of the eyelids, diplopia, urinary incontinence.

It is a sovereign remedy in congested headache when the face is flushed, head hot, eyelids ptotic, and there are flashes of light before the eyes, and a sensation of blindness.

It is one of the best remedies available with which to combat the night sweats of phthisis. Here, in doses of 1-250 grain, alone or in combination with agaricin, it will check the sweating and make the patient comfortable.

To check the flow of milk in nursing women who are weaning their babies, it stands first among therapeutic agents.

By stimulating capillary circulation, thus preventing the local effects of the acute congestion or inflammation in the congested organs, atropine is of great service in the treatment of tonsillitis, croup, bronchitis, pneumonia, and pleurisy.

In all pathologic conditions occurring in the chest that call for bryonin or asclepidin, atropine is useful, and may be combined with the other agents mentioned, to the enhancement of their value.

Given in pertussis together with calcidin, it shortens the paroxysms, renders respiration easier, and relieves capillary engorgement and the accompanying inflammation.

It admits of no substitute in the therapeutics of the fevers of malarial origin. Combined with aconitine at the onset of sthenic cases, it meets in an admirable manner many of the indications.

In the treatment of typhoid fever, the author considers it indispensable. Here it prevents any congestion of the intestinal mucosa and glands, which of itself is sufficient to entitle it to honorable mention. Under its effect, the heart is stimulated to send the blood thoroughly throughout the capillary system, thus preventing cerebral engorgement. The cerebral symptoms, so often seen in typhoid fever, exhibit many of the atropine indications, and under its influence are quickly dissipated.

While gelseminine is more frequently indicated in meningeal inflammations than is atropine, still, there are cases of a certain type in which the latter remedy is urgently called for. In the subacute cases of childhood, this is especially true. The skin is cold and moist, and there is a slowly increasing mental dulness. The temperature rises two or three degrees, the pupils are widely dilated, eyes are dull, head is drawn back and rolled from side to side, sometimes the child clasps its hands on the back of the neck, and upon pressure below the occiput pain is complained of. The patient sleeps with the eyes open, and there is involuntary urination.

While pilocarpine and ferric chloride are accorded the first honors in the treatment of erysipelas, yet, there are instances in which they seem of no avail, and many of these cases, if put on atropine and aconitine or on atropine in alternation with rhus toxicodendron, will show an immediate and most gratifying improvement. The author has found it most effective in those cases where the indications for rhus toxicodendron were prominent, that is, skin smooth, dark, and deep-red, sluggish circulation, burning pain.

Atropine in the Eruptive Fevers

The early use of atropine is imperative in the eruptive fevers. Under its influence, the rash comes out quickly, and when it is administered early, retrocression is almost impossible. Should retrocession have occurred, atropine will restore the eruption quicker than any known agent.

Even a brief study of its physiological action will convince anyone that atropine

should have a prominent place in the treatment of scarlet-fever. It aids in equalizing the circulation, stimulates the respiration, relaxes spasm, determines the eruption to the skin, hastens exfoliation, and opposes the renal hyperemia and nephritis so common a sequal of scarlet-fever. Even in the presence of a postscarlatinal nephritis few more prompt and reliable agents can be found. Here, it acts beautifully in combination with apocynin, and it can be alternated with santonin. In a case presenting with a partial suppression of the urine and an excess of urinary albumin, add 2 grains of gallic acid every two hours, and a cure is almost certain.

The pathology of nephritis is a direct appeal for atropine: albuminuria is caused by a great increase in the blood pressure in the renal vessel and engorgement of the capillaries. Atropine antagonizes all these changes in a manner that is prompt and direct, and in acute cases one or two doses are sufficient to convince the prescriber of its influence for good. It must, however, be given persistently in the subacute or chronic forms; when, if no structural changes have occurred, the results will be fully as satisfactory.

In the congestive type of dysmenorrhea, when it is combined with aconitine and gelseminine, atropine is exceedingly useful, the vast majority of cases presenting with a cold skin, cold extremities, dulness, chilliness, and inactivity; all of which symptoms are direct atropine guide-posts.

In rigid os uteri, an ointment containing atropine applied directly to the os, with caullophyllin internally, will often change the complexion of a case of delayed labor; much to the relief of mother and obstetrician.

By preventing adhesions between the iris and the capsule of the lens, and also by breaking up existing ones, it is indispensable in iritis. It also can be used with good results to allay the irritation in keratitis. In the latter condition, a solution of 1 or 2 grains to the ounce will be sufficient.

In recent cystitis, caused by chill, the alkaloid internally, with arbutin, and the ointment applied to the perineum, constitutes very efficient treatment.

An acute coryza can be broken up with a few small doses of atropine.

In the treatment of arterial cerebral congestion, atropine occupies a very prominent place. There may be hyperemia as a result of sunstroke (in which event it stands second to glonoin, the peer of all agents in such conditions), or the congestion following reaction from concussion, or the result of mental excitement or intemperance.

Atropine is indicated in those who take cold easily and are especially sensitive to drafts of cold air; for instance, in men who take cold after having their hair cut. There is, generally, headache of a throbbing nature. The pains come on suddenly, remain only a short time, and leave as suddenly as they came, without any apparent cause whatever.

The face is red and swollen, eyes are congested and injected, pupils dilated and staring. The carotids pulsate and the pulse is full and bounding, with the mucous membranes of the throat, nose and mouth hot and dry.

Atropine in Nervous and Mental Troubles

Atropine should be studied in all motor disturbances, when there is a condition of anesthesia or when, owing to the great irritability of all the senses, there is present marked hyperesthesia. The muscles jerk or twitch, conditions often met with in puerperal convulsions, the spasms of infancy, epilepsy, hydrophobia, chorea, whooping-cough, and locomotor ataxia.

Atropine occupies an honorable place in those mental disorders characterized by marked alterations in the moral tone of the individual—hallucinations, melancholia, and rage, with illusions of a spectral nature.

In the congestive delirium which frequently attends the acute fevers or which is a result of metastasis to the brain, atropine is the remedy of choice.

Congestive vertigo is relieved by atropine. It also relieves congestive, neuralgic or nervous headaches when the face is flushed, eyes are injected, the lids show ptosis, head feels as though it were on fire, or the patient may complain of a sensation of blindness, or, again, there may be flashes of light which dart back and forth across the eyes. Here, the headache is made worse by light, noise, moving or on lying down.

The place of atropine in the treatment of arterial congestions of the brain has been firmly fixed.

In the hyperemia of sunstroke, it has but one peer, and that is glonoin.

The congestions met with in cases of injury to the head, when there are present all the evidences of concussion, congestions brought on by great mental excitement or excessive indulgence in alcoholic beverages are promptly met by atropine.

It should be studied in neuralgia of recent origin or when occurring in young patients, especially when associated with hyperemia and hyperesthesia. The pains are generally most pronounced about 5 o'clock in the afternoon, coming and going quickly, and are made worse by motion. In these cases, it will be found, as a general rule, that the trigeminus is the nerve most affected.

In iritis and other conditions of the eye, it gives excellent results.

The dryness, soreness, painful deglutition, swelling, and burning sensation seen in pharyngitis and chronic tonsillitis are indications that call for atropine.

In all congestions and inflammations of the uterus, when the patient complains of a violent burning sensation, with nettlelike pains and a feeling of fulness as though the womb were pressing down toward the vulva, atropine should be studied.

Atropine in Fevers

Its position in the treatment of fevers is between aconitine and arsenic. The type of fever is usually continuous. In these cases, the face is red and congested, eyes are bright and glistening, and the other general indications for the administration of atropine are present. In puerperal fever, resort to atropine is imperative; also at the onset of scarlet-fever or measles when the skin is hot and glistening. In the Sydenham type of scarlatina, atropine is said to have a modifying influence on the course of the disease.

It has been used with good effect in peritonitis, when the transverse colon can be felt like a pad. There is soreness in the entire abdominal region and the tenderness is so great that even the jar of a person walking across the room disturbs the patient.

A dry cough, and the sensation of a feather in the larynx, worse at night, calls for atropine, although cicutine should be remembered in these cases.

In pleuropneumonia, after bryonin has completed its task and there remains an extreme and disagreeable soreness in the side, atropine will be found effective.

In mastitis, when the gland is hot and red, hard and heavy, the face flushed, eyes injected, pulse full and bounding, head throbbing, and there is an intolerance to light, atropine is of greatest service.

Specific atropine indication: congestion, especially of the cerebrospinal centers. Particular indications are: dull eyes, dilated pupils, somnolence and coma, night sweats of phthisis, convulsions, pertussis, epilepsy, neuralgia, chorea, hemorrhage. Differentiate from gelseminine, which has quite another field of action.

Refraction For the General Practitioner

By Thomas G. Atkinson, M. D., L. R. C. P. (Lond.), Chicago, Illinois
Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details, if you do not understand him fully.

Muscular Imbalance

WE HAVE seen, in one of our former discussions (see April issue) that, while accommodation and convergence are in reality two separate and distinct functions, so that one may be paralyzed without impairing the other, yet, they are normally interdependent. One stimulates the other, and they increase and decrease in mutual ratio. Indeed, as we also saw, the systems of measurement applied to accommodation and convergence, respectively, have been devised to express this constant ratio; the degree of convergence normal to the exercise of 1 D. of accommodation being expressed as 1 deg. of metric angle, for 2 D. a 2-deg. angle, for 0.50-D. a 0.50-deg. angle, and so on.

This correspondence obtains only when the refraction of the eye, and therefore its accommodation, is normal. A disturbance of refraction upsets the ratio; while the degree of convergence necessary for single vision at a given distance is absolutely constant, and never varies, the amount of accommodation required for that distance varies with the degree of hyperopia or myopia present. To see, clearly and singly, an object at 1 meter distance, for example, requires 1 metric angle of convergence, irrespective of the refraction of the eyes, being simply a geometric question of visual

axes. With normal refraction, the same distance demands 1 D. of accommodation. But, if the person be 1 D. hyperopic, he is already using 1 D. of his accommodation for distant vision, and must therefore exercise 1 D. plus 1 D., or 2 D., of accommodation for 1 meter distance. On the other hand, if he be 1 D. myopic he needs no accommodation at all for an object at 1 meter distance.

Now mark the result of this discrepancy between accommodation and convergence.

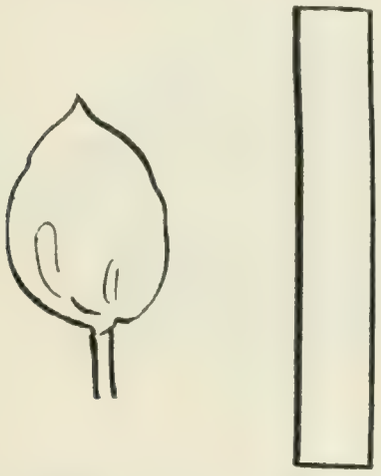


Fig. 1. The dissimilar images seen through the Maddox rod.

Normally, as between the two functions, accommodation is the stimulator, because it is the involuntary, or at least the subconscious. act.

When, therefore, a hyperope of 1 D. looks at an object 1 meter away, he puts into force 2 D. of accommodation. His immediate, natural impulse is, to make 2 metric angles of convergence to correspond with his accommodation; but this he may not do and have a single image. He may only make 1 degree of convergence. Hence, he is obliged to "hold back," so to speak, his convergence in an unnatural way, very much after the fashion of a man who tries to make a smashing blow with his fist and at the same time hit very lightly.

The myope of 1 D., on the contrary, looking at an object 1 meter distant, uses no accommodation, and his natural inclination, of course, is, to use no convergence. But, in order to have single vision at that distance, he, like the emmetrope and the hyperope, must make 1 metric angle of convergence. He, therefore, has to force his convergence in an unnatural way.

To be sure, hyperopic and myopic patients get accustomed to the discrepancy, so that eventually the unnatural exercise of accommodation and convergence becomes, to all intents, a natural one. Indeed, as we shall presently see, when we correct these patients' errors of refraction and restore the proper ratio between accommodation and convergence, if their errors are of any magnitude, they are usually bothered a good deal to get accustomed to the normal relationship. It must not be supposed, however, that this class of patients get accustomed to the discrepancy by dint of *canceling* it. They simply learn habitually to *compensate* for it; which is quite another matter. Canceling the discrepancy would exempt the accommodative mechanism from extraordinary stress; compensation involves continual stress.

As to the Mechanism Involved

Let us look a little more closely into the mechanism of the matter. Convergence, as we know, is performed by the extrinsic muscles of the eyeball; we may say, for practical purposes, by the internal and external recti, the other muscles playing merely an accessory role to these cardinal pairs. Positive convergence is performed by means of the internal recti; negative convergence, by the external. Each of these pairs of muscles has its limit of functional capacity, as we have seen—the former 20 to 30 deg. prismatic angle, the latter 6 to 8 deg.

When the hyperope of 1 D. fixes his vision upon an object at 1 meter distance, he uses,

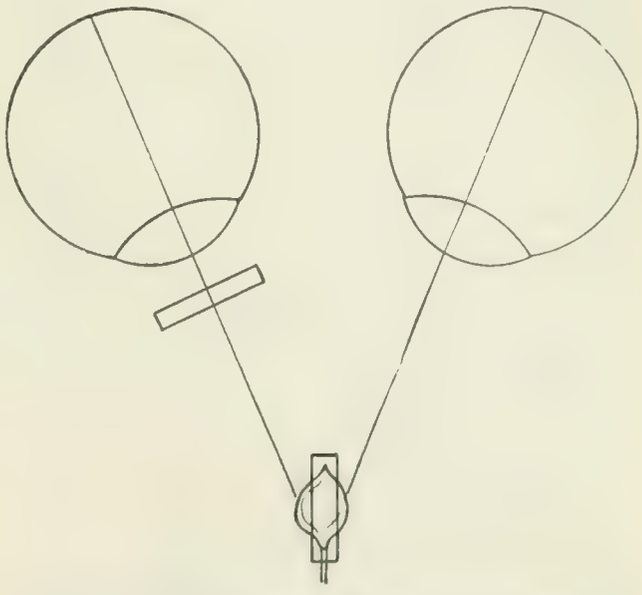


Fig. 2. Fusion of the images as seen by the normal eye through the Maddox rod.

as we have seen, 2 D. of accommodation, and is thereby stimulated to make 2 degrees of convergence, whereas he must make only 1 degree. Now, if he could, by a subconscious effort of the mind (which would quickly become automatic), simply refrain from making the extra 1 D. of convergence to which he is stimulated, the discrepancy

would impose no strain upon his muscles; that would be canceling the discrepancy.

Unfortunately, that is what the hyperope can not and does not do. When he uses 2 D. of accommodation, the stimulus to the convergence invariably, and unavoidably, works itself out; 2 D. of innervation is sent into the internal recti; 2 D. of contraction takes place in those muscles; and the only remedy left to the visual mechanism is, to oppose 1 D. of it by means of the external recti.

This is what actually happens. This is not cancelation, but compensation, of the discrepancy between accommodation and convergence; and it is accomplished always at the expense of the opposing muscles. Thus, a hyperope, every time he accommodates, brings into extraordinary play both pairs of muscles, the internal recti overconverging, the external recti opposing and correcting the overconvergence.

With the myope, the situation is somewhat different. At a distance of 1 meter or further, the myope uses no accommodation, and, as accommodation is the stimulating function, he feels no desire to converge. Whatever convergence he makes at this distance is done deliberately, soon becoming automatic; so that at 1 meter or further the myope does actually cancel the discrepancy, and suffers no strain upon his internal recti such as the hyperope suffers upon his external muscles.

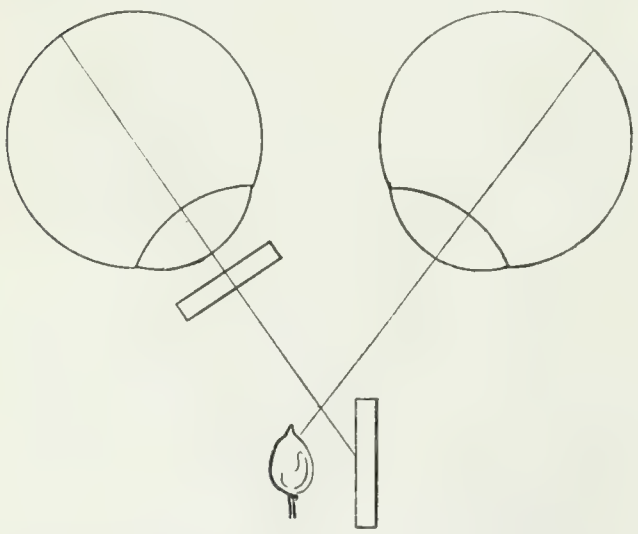


Fig. 3. The dissociated images seen in divergent imbalance with Maddox rod.

For this reason, myopes suffer far less discomfort and muscular trouble than hyperopes. Within 1 meter, the myope still accommodates less than normal, and the stimulation to convergence always is less than normal, calling for a deliberate effort of the internal muscles to make up the deficiency. Thus, in myopia, there is no undue strain upon the outer muscles, but only a slight extra demand upon the inner; so that, all around, the myope is better off in this respect than the hyperope. Only in severe cases, and under hard usage, does the myope succumb to the strain.

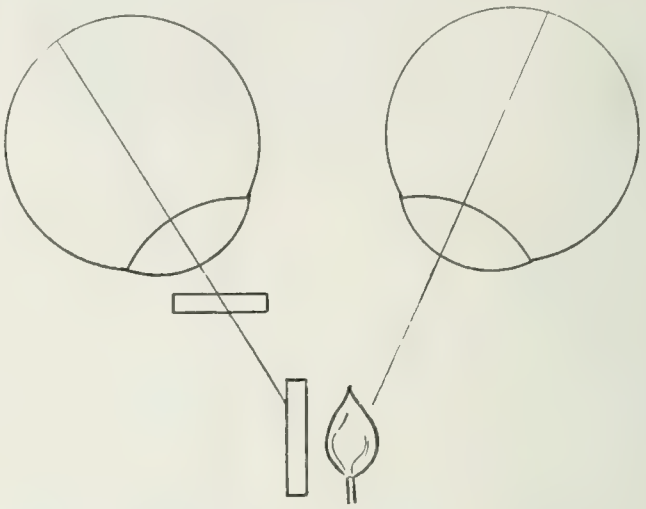


Fig. 4. The dissociated images seen in convergent imbalance with Maddox rod.

Muscular Imbalance Developing into Strabismus

Returning to the case of the hyperope, and carefully considering the conditions which I there described, it will be at once apparent (I need spend no time elaborating this to the medical man) that the tendency is all the time toward spasticity on the part of the inner muscles and toward exhaustion on the part of the outer ones. As long as the two optics manage, between them, to maintain single vision, this state of affairs is designated muscular imbalance, and is made manifest only by certain tests—of which more later. But, in many patients, the time comes when the exhaustion of the external muscles can no longer hold out against the spasticity of the internal ones; the outer muscles give up the struggle; and internal strabismus results. While the struggle lasts between the unequally balanced muscles there is generally headache and other nervous troubles, owing to the unequal innervation of the opposing sides; but when the conflict is abandoned and the external muscles surrender, these nervous disturbances usually disappear.

In myopia (again I refer the reader to my description of the conditions), the internal muscles are inclined to exhaustion, while the external remain virtually normal. Hence, when imbalance breaks down into strabismus,

it is the internal recti which succumb, and the squint is external. However, for reasons already given, squint resulting from myopia is much rarer than squint due to hyperopia; and it is not so marked when it does occur, because there is no spasticity in the surviving muscles, as there is in hyperopia.

The Maddox Test for Muscular Imbalance

There are several methods of detecting and measuring muscular imbalance. The

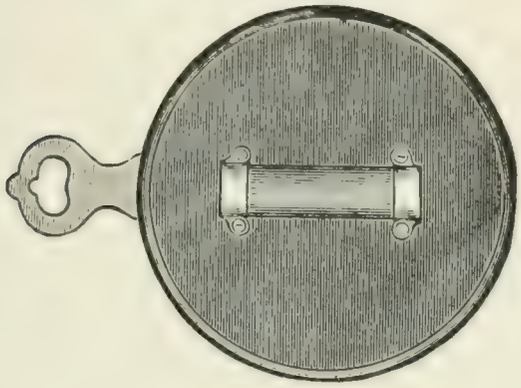


Fig. 5. Maddox rod

one in commonest use, however, is what is known as the Maddox rod-test. The Maddox rod is a narrow cylindrical rod of glass, set into an opaque disc, which has the effect of drawing out the light into a similar rod at right angles to the axis of the glass cylinder. (See "Cylindrical Lenses" in the March number.)

The Maddox test is based upon the fact that, if we can make the images of the same object that are thrown upon the respective retinas so dissimilar as to destroy all desire for a single image, the ocular muscles will give up whatever struggle they are making to maintain that single image, and will assume their actual relation to each other. If they are making no struggle, that is, if the single image is obtained without any struggle, it will be maintained even when the images are dissimilar; but, if there is a struggle, that is, if there is a muscular imbalance, we shall uncover it by this procedure.

The Maddox rod, therefore, is mounted before one eye, with its axis horizontal, and the patient is told to look at a candle flame 6 meters away. To this eye, the candle flame presents the image of a drawn-out upright rod of white light. To the other eye, it presents the image of the ordinary flame—which is usually made still more dissimilar by putting a red glass in front of the eye. There is now so much dissimilarity between the two images that the muscles give up whatever struggle they are making (if they do so struggle) to maintain single vision and assume their actual relations to each other. If there is no struggle, single vision is maintained.

With the Maddox rod, therefore, if the musculature is normal, the patient sees a red candle flame with a white streak of light running, up and down, exactly through the center of the flame. If he have imbalance, he will see a red candle flame with a white streak of light a little to one side or other of the flame, more or less to one side, according to the degree of his imbalance.

If the displacement of the two images is what is known as homonymous—that is to say, each image on the same side as the eye that sees it, the red flame on the same side as the eye with the red glass and the streak on the same side as the eye with the rod—then the imbalance is internal, due to hyperopia; if the displacement be heteronymous—that is, each image on the other side from the eye which sees it—then the imbalance is external, due to myopia.

The explanation of this crossed displacement is, that the image on the retina is an inverted one, the retina receiving rays from the opposite visual field. A glance at the accompanying illustration will make this clear.

Having found out whether the imbalance is internal or external, we then put prisms before the eyes, with their bases according

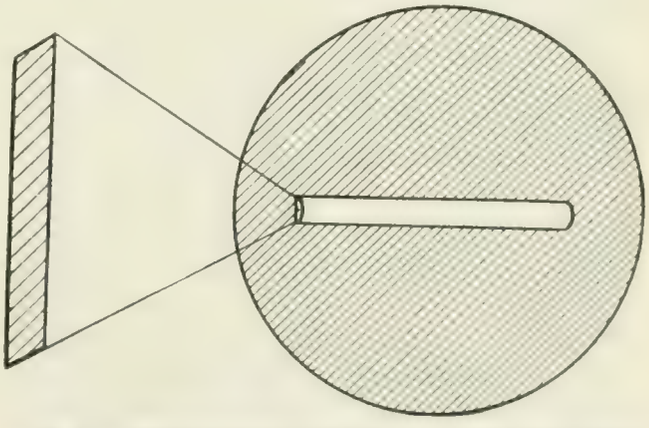


Fig. 6. Showing how the Maddox rod draws out a bar of light at right angles to its axis.

to the nature of the displacement—base in if the imbalance is internal, base out if it is external—until at last we find the particular prism strength that brings the two images together. This prism angle is the measure of the degree of imbalance.

In my next article I shall deal with the diagnosis and measurement of actual strabismus, and the methods of dealing with these muscular troubles.

The Medical Economic Situation

A Study of Plans for Professional Defense

By Daniel S. Hager, M. D., Chicago, Illinois

[*Concluded from page 785*]

IN CRITICIZING freely present conditions in the profession, we certainly should be ungrateful if at the same time we could not offer remedies for their correction.

The report of the Erie County (Pa.) Medical Society contains some solid food for reflection, and the portion naming as the causes for the contract-practice abuse is worth repeating; to wit:

"(1) Lack of knowledge of the ethics of medicine. (2) Professional jealousy. (3) Indifference of the older practitioners. (4) The example set by some of the older practitioners. (5) Overcrowding of the profession. (6) The tolerance of this state of affairs by all medical societies. (7) The commercialism of the age. The professional struggle, not only for the almighty dollar, but also for the mighty cent. (8) The chief cause of all, however, we found to be the complete disorganization of the medical body. This is the phase of the question to which we must give our attention, namely, the disorganization of the medical body."

Doctor, do you see that this disorganization of the medical body is one of the conditions that has kept, and is now keeping, medicine in the state it is in, and one of the conditions of which the politicians take advantage and, in the event of a national insurance law, will constitute one of the holds the politician will use as a lever to bring the profession under his thumb?

In Germany, I understand, many men belong to two societies. One society has to do with scientific medicine and the other with social-economic phases of medicine. And this is one of the things that, no doubt, will help to better conditions here, and which must be brought about sooner or later. In fact, the condition already is beginning to regulate itself in this way in several of the larger cities where the economic clubs are entering into this phase of the subject.

The economic medical society should concern itself with social-economic questions only, and leave scientific medicine alone; although it should seek to aid scientific medicine in every way possible so long as that means improved social and economic welfare of the profession.

Scientific medicine, on the other hand, should recognize the right of economic medicine and leave it leaway to go about its purpose. Scientific medicine should be supported with no more funds than are absolutely necessary to do its work, while economic medicine should be put into the best possible financial working-condition, have a manager, and issue literature in which all reasonable complaints could be voiced, besides adopting rules of ethics helpful in eliminating the abuses.

Please remember that the old-line ethical rules have, in the past, caught the little fellow, but the "biggun," with his special writeups and special editions heralding the wonderful ability of this clever kind of advertiser, has escaped, even though he may have freely boasted about his motives for the publicity he purchased through the press, as I have known one of them to do.

What the Economic Society Can Accomplish

The economic society should charge a good membership fee, but should give something substantial in return for it. Much could be done to help the practitioner to help himself, but it requires money to carry forward any work of value. Such an economic club in the larger cities, as New York, Chicago, Philadelphia, for instance, could form a central clinical center and help legitimate students and practitioners to gain practical knowledge and technic. Instead of a position bought with money or political influence that gives the holder a life-position, the higher offices should be given to those worthy, for what they had done for the profession, while the lower positions could be used for the benefit of the profession.

Men seek positions in hospitals and dispensaries mainly for the following reasons: (1) To have an opportunity to do scientific work and to advance medicine. (2) To gain experience, so that they may give better service. (3) To gain experience and reputation, so that they can obtain large fees by virtue of the prestige gained by such positions, as well as to get patients into their office from the clinics. (4) To keep in touch with the work and help the science of medicine in their particular line all that they can.

The commercialism of our age has made class three the ruling motive for professional service in the great majority of hospitals and dispensaries, and it is one of the causes of dispensary abuse. Ambitious doctors will do all they can to gain acquaintances and reputation and will court the prestige with all the business acumen consistent with the situation. Too often they will not hesitate even to injure those associated with them if they may thereby advance their own interest. There are many little "dirty" tricks that may be done without incurring any breach of ethics not ruling the ethical-relations committees. Appropriate new ethical rules will change the conditions.

A Central Clinical Home or Club

A central clinical home or club could, in this way, be built up in the larger cities, and these could later be made the home of all the societies and become the clearing-house for charity cases as well as a place where interesting cases could be shown. Such a clinical home or club could fulfil the requirements to help many a poor patient who does not wish to be pauperized by being treated at a dispensary but can not afford the price demanded by the specialists. Doctor Warner, of the Lakeside hospital, Cleveland, has put this matter in a very nice way, and his ideas are certainly just and ethical.

Such a clinical home could be financed and, I feel, would be liberally provided for by the profession, and ultimately might be made of great value to the profession and, in return, to humanity. In my opinion, it would ultimately solve the medical-charity-abuse question, for in this way the staff men as well as the patients would get under the control of the profession, and all the clinical material could be used for the benefit of the whole profession instead of for a few men on the staffs.

This centralization is, in fact, now going on in New York and has just begun in Chicago, and it must be brought about before much can be hoped from the medical-charity-abuse movement.

There is plenty of charity clinical material that should be made use of, but it is not available now, and; if I mistake not, more material will be needed ere long. For, I firmly believe that the present quiz-compend graduate, as well as the present system of hospital internship, is inadequate to supply the education that is needed in this day of practical things. A concentrated clinical course where the student sees and helps until the conditions become impressed on his mind is the only logical means for practical instruction. A few clinical cases shown by some professor will no more make a student proficient to cope with the problems of general practice than such a theoretical course would make an astronomer. True, clinical cases are needed to simplify and emphasize the theories taught, but efficiency and proficiency can come only through handling cases personally.

The New Doctor Must Have Experience

Have we not for too long sent out inexperienced doctors? Is there any trade or profession that would not be in disrepute if raw, inexperienced men were sent out to build up structures where the very highest class of efficiency should be supplied? Is not the educational propaganda, through public-health lectures, newspaper and magazine articles, demanding that the physician of today must be able to meet these higher ideals of this greater age of education? Is it not logical that the man who has studied only a lot of theories will in a few weeks have forgotten these, and then will be as inefficient as ever? Is it not different, however, when he has handled and helped in the class of cases with which later he becomes confronted?

Seriously, do you think that a student working in a small hospital where the cases are limited to surgery gains that practical experience necessary to do a general practice? Does he see and handle enough cases in every line of ophthalmology, otology, laryngology, dermatology, orthopedics, and pediatrics to make him proficient to handle this class of cases when he settles in a community? Do you know that is exactly the reason why the cults and pathies flourish?

Who is to blame for this? Answer: You and I, who now allow this condition to go on, when we should endeavor to change this condition.

Danger from Over-Development of Hospitals

Can you not see that a young man or woman in the prime of life, giving the best part of his or her life to the service of an institution and without compensation, is building up this class of institutions at your expense? Do you know that these institutions are thriving as no other class have ever thrived? Do you know that practically every hospital in Chicago has been rebuilt, in the last few years, with more than twice its former capacity? Do you know that these hospitals have become arrogant and domi-

neering to a great extent and the superintendents, in order to keep the beds and wards filled, reach out great distances and offer free medical and surgical service for securing patients? Can you not realize that the experience and prestige gained, at your expense, by men on the staffs of these institutions gives them big fees?

When the interne and nurse, as well as the staff surgeon, give their service for nothing and all the little details are looked after free, why should these institutions not grow? Is there any wonder that, when the interne goes out, filled with high hopes and finding the chosen field usurped by the institutions, he engages in contract-practice or offers a big dividend to those who refer cases to him?

The Post Graduate Schools

The postgraduate schools, which in their day have served a useful purpose, are not practical now; for the present demands must also gradually be brought under this central control, since they, too, are looking for more clinical material. As long as these schools are allowed to depend upon the fees they derive for their support, just so long will they be inefficient and at the same time charge exorbitant prices for their inefficient teaching.

Branches under the direct control of the central clinical home could be established and in this way aid the central home, while at the same time the central home could aid the branches. This would bring the branches directly under the jurisdiction of the society. Postgraduate study should be encouraged, by giving better opportunities to gain practical experience to those who are trying to make themselves more proficient, and the post graduate work should be given to practitioners at fees that are consistent with the class of work that is being done. If the practitioner will build up his own institution, this could readily be done.

Please, remember that, if a national industrial insurance law will become effective, much material which on account of lack of money now seeks dispensaries will then go direct to the family physician, and there will be a greater dearth of clinical material. Measures must then be adopted to secure more clinical material for the schools. Concentrated clinical finishing touches on the new graduate must come to prepare him to meet the higher demands.

Conclusions

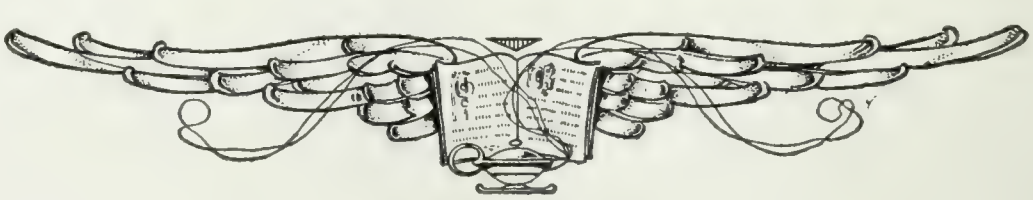
1. New ethical rules should be adopted and enforced where new conditions demand them in the communities where the new conditions are manifested.

2. In the large city the clinical material should be gotten directly under the control of the profession and used for the benefit of the profession, so that men may become more proficient and give better service to humanity.

3. A concentrated clinical course should supplant the present inadequate hospital internship as preparation to do general practice. A concentrated clinical course or experience in general practice should be made a prerequisite to specialization. The internship should be reserved for those who wish to specialize in surgery and, as this involves hard work in the prime of life, some compensation should be insisted upon for such service.

4. We need a new society liberally supplied with funds, uniting all branches of the profession and taking up all the social and economic problems of the profession, with a salaried manager to direct its work. Scientific societies should be encouraged in their particular line of work, and maintained at membership rates that are consistent with the service bestowed. The society should aim to give returns for every cent the practitioner gives it in dues.

5. In the larger cities, we should have central homes for the various societies and these should be places where clinical material could be shown and practitioners helped. To this, I would add a pay loan library of modern medical books. Gradually also a profession-owned hospital system should be built up and other hospitals asked to join in centralizing clinical material for teaching-purposes.



What Others are Doing

ANTITYPHOID VACCINE

Netler (*Ann. d. Méd. et Chir. Inf.*, Oct. 15, 1913) reports upon 20 typhoid-fever cases in which vaccinotherapy was employed. As soon as hemoculture confirmed the diagnosis, he injected a medium dose of bacilli of from 200 to 300 millions. He has obtained no good effects from doses of 25 millions. In his 20 cases, he could use only the bacterin in 14, of whom but one died. In the other 13, amelioration was rapid, and in five to eight days the temperature had fallen, urine was increased, tongue became humid, and the appetite returned. In some other cases, improvement was slower but no less manifest. There were three mild relapses, and two of these patients were treated successfully with injections of the vaccine. This is a smaller proportion of relapses than usual. No grave complications followed the vaccine injections, even in large doses. In one case, there was some influence upon the secretion of bile, and in another there were appendicular disturbances.

NERVE IMPLANTATION FOR RESTORING PARALYZED MUSCLES

Extremely interesting experiments (extending the work of others) in the direction indicated in the heading were described by Heineke, of Leipzig, at the 43d Congress of German Surgeons held in April at Berlin. (Cf. *Muench. Med. Woch.*, June 2.)

First depriving a muscle of the animal of its nerve, then implanting (without regard to locality) some other, nearby, motor nerve, the latter forms an intimate organic connection and restores functional life to that organ. Already after two or three weeks, we are told, the muscle shows a slight irritability, and after the lapse of some six or eight weeks the entire muscle contracts in an almost normal manner upon excitation of the recently implanted nerve. More wonderful yet—a muscle paralyzed for weeks or months, and rapidly degenerating, gradually becomes revivified after the same procedure and again exhibits normal irritability after a few months.

Subsequent experiments demonstrated in what manner the union of the nerve comes about. The axis-cylinders grow toward the muscle-fibers and, upon contact, produce fresh end-organs encircling the individual fibers. Seemingly, these fresh nerve-fibrils form within and follow along the sheaths rendered vacant by the disappearance of the original severed nerves of the muscle—this latter occurrence, hence, being a condition precedent to the success of the operation. This deduction Heineke draws from the fact that a healthy muscle does not respond to excitation of a nerve that has been implanted into it, as above described, as long as its proper nerves remain intact in their connections.

In the discussion of the paper, Erlacher (Graz) said he had been conducting similar experiments and had applied the idea in a case of paralysis of the trapezius muscle.

PLEXUS GRAFTING IN EXTENDED PARALYSES

Following the preceding speaker at the Congress, Katzenstein, of Berlin, (*loc. cit.*), expressed doubt as to any great practical value attaching to Heineke's work, inasmuch as his operation affects but an isolated muscle and for that the transplantation of tendons and (even better) of muscles already is at our disposal. On the other hand, the medical world has stood helpless when confronted by general paralysis of limbs. However, for these pitiable states the speaker claimed to have evolved a plan that had proved practicable, not merely experimentally, but in actual practice.

This new method consists in grafting a sound nerve of the opposite side into the plexus of the paralyzed extremity; the supposition being that the newly implanted nerve would proceed to grow from the plexus into the nerve-tracts of the affected limb. And this actually was found to take place. Thus, using a monkey, an arm was paralyzed (as in infantile paralysis) by

cutting the nerve at its anterior roots in the neck, the nerve graft was executed. With the assistance of Bielschowky, multitudinous newly formed nerve-fibers were demonstrable clear into the minutest ramifications of the nervus ulnaris, radialis, and medianus. A similar revivification of dead nerves was traced in persons thus treated.

The speaker particularized several operations upon patients. In one instance of paralyzed arm, the nervus superclavicularis and in two cases the ramus descendens hypoglossi of the sound side was carried toward the plexus of the paralyzed arm by passing it behind the vessels between the esophagus and the spine. For a lame leg, the sound nervus obturatorius with all its branches was severed, carried across behind the peritoneum, and sutured into the paralyzed plexus lumbosacralis.

VARIOUS REMEDIES FOR DYSENTERY

Karl Justi, of Hongkong, recording his experience with dysentery in China (*Muench. Med. Woch.*, 1913, p. 764), carefully distinguishes between the bacillary and the amebic form. As to the latter, he states, he has had good results from the use of ipecac, but owing to its nauseant properties he prefers simaruba associated with antiseptics, a certain combination of which has proven equally as effective.

This favorite antidysenteric mixture has this formula: Simaruba bark, powder, Gm. 3; benzonaphthol, Gm. 3; bismuth subnitrate, Gm. 8; syrup of krameria, Gm. 30; syrup of acacia, Gm. 200. Dose: A tablespoonful every three or four hours. He relies upon the benzonaphthol and the astringents for destroying the amebic enemy.

Besides the foregoing, Justi also mentions kosamin and uzara as giving satisfaction. (Kosamin we cannot place just now; uzara is an asclepiad plant of central Africa used by the natives for diarrhea.)

Concerning the bacillary form of dysentery, the author claims to have found a certain fluid extract of the rind of garcinia mangostin fruit effective, this being rich in tannin. However, he claims that invariably a cure followed the administration of Koehler's mixture, consisting of the fluid extracts of simaruba bark, pomegranate, and Campechy wood. This, though, must be preceded by a good purging.

In the case of children, Justi treats bacillary dysentery with the following mixture: Extract of bael fruit, Gm. 5; aromatic spirit of ammonia, Gm. 4; chalk mixture, Gm. 30; cinnamon water, Gm. 50. Dose: A teaspoonful every three hours. This will cure infants without a change in their diet (mother's breast).

Doctor Justi evidently had not yet heard of the wonderful cures effected with emetine; which, moreover, is free from the objection of inducing nausea in the same degree as the crude ipecac. Nevertheless, even though we have a good remedy, it always is well for a doctor to be in possession of a varied armamentarium—for the human organism reacts so capriciously, often, to remedial agents, and conditions may be so obscure that it is well to be able to try more than one treatment.

In the present case, the remedies, and their form, plainly are quite old-fashioned; still, sometimes treatments yield result where science—chemistry and pharmacology—cannot offer a rational explanation. On the other hand, tradition and conservatism are all there is to justify certain therapeutics.

Take simaruba. This is the root-bark of quassia simaruba, a tree botanically related to quassia amara (the nomenclature is confused. Before this fact was established, simaruba acquired fame as a "sure cure" for dysentery and chronic diarrhea, while quassia became famed as a bitter tonic febrifuge; and this distinction persists in the medical mind, although chemists find quassine as the only active constituent in both, with no important differences in the other principles. In view of these facts, it were time for clear-headed clinicians to take up quassine more energetically and prescribe it in all instances where tradition recommends simaruba.

Then there also is the case of the manifold vegetable astringents—oak-bark, kino, catechu, rhatany, blackberry-root, cranesbill-root, and all the rest of tannin-bearing plant-drugs—what about them? In Justi's communication we are confronted by three of the list, rhatany, logwood, and bael fruit! Still, one fact must not be lost sight of, namely, that the tannins of these various drugs are more or less distinct, peculiar substances, and not exactly identical.

CHROME POISONING

A case of death resulting from sodium bichromate has been reported in the *Deutsche Medizinische Wochenschrift* (1913, No. 12). The victim was a dyer who had the habit of biting his finger-nails, and his sickness developed some ten or twelve days after work-

ing with that chemical. A prominent feature was the irregular, small, and accelerated pulse. Besides, the skin was colored markedly yellow and the sputum was blackish-brown. He died on the tenth day. The bodily secretions gave the reactions for chromism.

EMETINE IN AMEBIC DYSENTERY

At the meeting of the American Proctologic Society recently held in Atlantic City, two papers upon the treatment of amebic dysentery were read: the first by Dr. Alfred J. Zobel, of San Francisco, and the second by Dr. Wm. M. Beach, of Pittsburg.

The first speaker reported two interesting cases of the disease, in one of which the patient had been a sufferer for ten years, and the other for fourteen. In both these cases emetine hydrochloride was employed, and n each instance the amebæ, blood, mucus, froth, and foul odor disappeared from the feces within two or three days, and the number of stools was greatly diminished. At the same time the racking tenesmus, bearing-down feeling in the rectum, and the abdominal tension, discomfort, and gurgling absolutely ceased. Proctologic examination showed a favorable influence of the drug upon the amebic ulcerations. No rectal irrigations were employed.

Doctor Zobel also reported some interesting experiences with other cases seen by him in consultation. He is convinced of the necessity of proctoscopic examination of the bowel and of microscopical examination of the feces in every instance where a diarrhea lasts longer than a week, even though the patient has never lived in or visited a locality where amebic dysentery is known to exist. He also advises that emetine should be continued intermittently for at least three or four months, before the patient can be considered free from the possibility of a recurrence, even though he is clinically cured and the amebæ can no longer be detected in the stools.

Doctor Beach, in his paper, declared that amebic dysentery in the early stages may be cured with emetine, while in the somewhat advanced cases the drug certainly is efficacious, and at least clinically curative. However, he believes that the subcutaneous injection of emetine is not always sufficient, and he suggests the introduction of solutions of emetine through the duodenal tube, in order to bring it directly into the intestinal tract. In the very advanced cases, surgical intervention may be advisable for rapid cure; besides, cecostomy and appendicostomy, presumably in association with direct irrigation through the fistulas thus created, are warmly advised. In most cases of amebic dysentery, Doctor Beach also thinks the appendix should be removed.

RECURRENCES OF AMEBIC DYSENTERY

Now that it has been demonstrated that there are occasional recurrences of amebic dysentery (which, however, are usually readily alleviated by repeating the emetine treatment), the advice given by Dr. Lucien Mayet in the *Province Médicale* (Feb. 21, p. 95) for the treatment of such relapses is worthy of special notice.

When the disease recurs some time after treatment has ceased, Mayet advises the following procedure, the treatment being divided into three stages:

First "cure:" Two subcutaneous injections of 2 to 4 centigrams (1-3 to 2-3 grains) each of emetine hydrochloride daily for three to five days. If the relapse is severe, the daily dose of the emetine may be increased to 12 centigrans (2 grains).

Second "cure:" A course of treatment similar to that already described is given ten to fifteen days after the first one.

Third "cure:" The treatment is again repeated twenty days after the second "cure."

Under such a course of treatment, in the majority of instances undoubtedly the entamœba hystolytica will be completely eliminated from the body.

If we may offer one additional suggestion, it would be, that the patient's lower bowel be washed out occasionally with a solution of quinine hydrochloride, so as to assure complete elimination of the parasite.

ANTISEPTIC INHALATIONS IN PHTHISIS

C. Muthu informs us (*Brit. Med. Jour.*, Sept. 13, 1913, p. 669) that since 1895 he has been using antiseptic inhalations in the treatment of pulmonary tuberculosis, in combination with other methods of treatment. He uses two methods, namely:

(1) The lamp-method, in which the formaldehyde is vaporized in a methylated-spirit lamp containing a hot-water boiler, the inhalations being taken in the patient's own room, with wholly or partially closed doors and windows, and for half an hour at a time. (2) The continuous method, for which a specially designed inhaler is employed. Usu-

ally the patient is provided with the inhaler for two hours the first day of treatment, for four hours the second day, six hours the third, and eight hours the fourth and subsequent days. This inhaler is so constructed that the patients can keep it on while they are walking, resting, reading or playing games.

The following solutions are employed:

A.—Formaldehyde, 2.5 percent; chloroform, dr. 1; menthol, grs. 10; oil pinus pumilii, m. 10; alcohol, enough to make oz. 1.

B.—Formaldehyde, 5 percent; guaiacol, dr. 1; chloroform, drs. 2; menthol, gr. 15; oil pinus pumilii, m. 15; alcohol, enough to make oz. 1.

C.—Guaiacol, drs. 2; terebene, dr. 1; menthol, grs. 15; oil pinus pumilii, m. 15; chloroform, drs. 2; alcohol, enough to make oz. 1.

D.—Guaiacol, drs. 2; iodine, dr. 1; terebene, dr. 1; oil pinus pumilii, m. 15; chloroform, drs. 2; alcohol, enough to make oz. 1.

About 10 drops of the inhalant is to be sprinkled on the inhaler every half or one hour.

Aside from its directly modifying action upon the tubercular process, the inhaler has the advantages of affording protection against strong winds and dust when the patient is out walking; also colds and influenza are practically unknown in the sanatorium. When a cold is contracted on the outside, the use of the mask prevents the cold from spreading downward and starting fresh mischief in the lung.

CALCIUM-THERAPY IN TUBERCULOSIS

Some years ago Ferrier recommended the use of lime and the calcium salts in the treatment of tuberculosis, this therapy being based upon the theory that tuberculosis induces a decalcification of the organism. The use of this substance is warmly recommended by Max Kahn, in *The Medical Record* (May 23, p. 924). He quotes many authorities who have prescribed calcium in one form or another, and who alleged good results.

Personally, we have much faith in lime-therapy in this disease, especially when this agent is combined with other substances having a more specific action, as with iodine in iodized calcium. The reconstructive action of calcium plus the specific action of the iodine seems to give peculiarly good results.

We have been particularly struck by the desirability of using iodized calcium as a substitute for the potassium iodide as recommended by Curle, following the iodide with chlorine water, in order to get the specific action of the nascent iodine. In the few cases which have come to our attention, in which the combined iodized-calcium and chlorine treatment have been tried, the results have been excellent.

We shall be glad to hear from those of our readers who are experimenting with this treatment, and we shall be glad to give what assistance we can to those who desire to give it a trial. It certainly has promise.

NITROBENZOL AS A POISON

Perennially European medical journals—especially those in the German language—discuss the occurrences of poisoning from nitrobenzol, not a few of which result in death. One of the latest contributions, and instructive withal, appeared not long ago in the *Pharmazeutische Zentralhalle*, from the pen of Dr. J. R. Spinner, who has devoted considerable study to this important problem.

The reasons for these cases of poisoning are numerous, but resting largely upon ignorance of the dangerous properties of nitrobenzol, coupled with its cheapness as a perfume and flavor. Added to this, is the fact that this article largely is presented to the public under the guise of fancy or misleading names, the old-time "mirbane oil" being one of the most dangerous ones. (It has been used even for salad "oil.") Moreover, being volatile, this substance does harm, not merely upon being swallowed, but when inhaled; besides by its deleterious action upon the skin.

Because of its concentrated odor and taste, in conjunction with relative cheapness, the use of nitrobenzol (as oil of mirbane) has become universal—it is ubiquitous. Everywhere in products designed for daily use by the people at large one is confronted by the obtrusive odor of "bitter-almond"—hair-oils, mouth-preparations, cleansers, cheap perfumes, soaps, crémes, lotions, shoe-polishes, leather-greases, salves, vermin-destroyers, paints, varnishes, what not; besides which it largely appears in culinary preparations as a bitter-almond and cherry flavor.

This is a matter which, undoubtedly, ought to receive closer governmental supervision and restriction; for, not only are people unwittingly harmed by the free use of nitrobenzol and not infrequently are poisoned by the mistaken use of such articles, but workers obliged to handle material of this kind suffer in health (even are killed) by constantly

inhaling the vapor of this deadly chemical or having their skin poisoned either by direct contact (greases, polishes) or even by the vapor. Furthermore, not a few sensitive individuals have been harmed by lotions, salves, and cosmetics thus perfumed. One can only agree with the author that the substitution of other, nontoxic, odors should be insisted upon by the authorities.

The phenomena of poisoning following in the wake of nitrobenzol, ingested in large dose or in small dosage over a long period or also when inhaled or coming in contact with the skin, have been given in summary by Dr. J. R. Spinner in his lengthy contribution to the *Pharmazeutische Zentralhalle* (1913, No. 35), and they seem worthy of quoting.

In the first place, when an unusual amount of nitrobenzol was ingested, its odor is imparted to the breath, excreta, and dejecta; especially in the usual vomit. Cyanosis is characteristic. The syndromes, in the various degrees and forms of poisoning, are enumerated as follows:

1. In mild cases: Uneasiness, headache, dizziness, nausea, loss of appetite, constipation, burning of the skin and mucosas.

2. In severe cases: Anxiety, disturbed sensibility (such as crawling sensation over the limbs, ear-noises), disturbed coordination (gait, speech), increased reflex excitability, jerking and spasms (later, with diminished sensibility), paralytic phenomena, vomiting. Furthermore: Icteric skin discoloration, at first increased then diminished pulse tension, disturbed vision (amblyopia, optic neuritis), blood becoming viscid and brown-colored; decrease and changed form of the erythrocytes, in the advanced stages, because of the methemaglobin resulting from their decomposition. Death, preceded by unconsciousness. In these cases, the phenomena of hemic destruction predominate over neurologic symptoms.

3. In subacute and chronic cases: The yellow discoloration of the skin gradually is displaced by cyanosis. Methemaglobin appears in consequence of degenerative processes in the blood. There is lassitude in connection with anemia, much resembling pernicious anemia. Tests may show the presence of nitrobenzol, hematoporphyrin, and albumin.

The author repeats the successful treatment (pronounced by him as rational) instituted, and as reported by Dr. O. Roth, of Zurich, in the case of 42-year-old woman who had swallowed a dessertspoonful of the drug in question, and whose condition was extremely precarious. Stated in general terms, his treatment consisted in drawing 300 Cc. of blood, infusing normal salt solution, giving camphor, in oil solution, hypodermically, and providing oxygen for inhalation. She had been transferred to the hospital. Pregnant about two and one-half months, the woman failed of her object.

We have given this report at length because cases of nitrobenzol poisoning are likely to become increasingly frequent in America, especially in industrial centers, with the development of the chemical industries following the shutting off of importation from Germany. Within a week a severe case of poisoning from inhalation of this substance has occurred in the person of a trained chemist known to us, and employed by a pharmaceutical manufacturing firm which is now making nitrobenzol as an intermediate product essential to synthetic work of an important character. Fortunately this young man responded to energetic treatment, along the lines laid down above. Physicians generally should be prepared for cases of this kind.

CHOLIN IN THE TREATMENT OF CANCER

The British Medical Journal for December 13, 1913 (p. 1553), has an interesting abstract of an article published in the *Muenchener Medizinische Wochenschrift* for September 23, 1913, in which Professor Werner's experiences in treating cancer with cholin, used in association with radioactive treatment, are reported. He uses the borate of cholin, employing 2 or 3 Cc. of a 10-percent solution, diluted to 20 Cc.; the remedy being administered by intravenous injection. Injections are given once daily for three or four weeks, and the course is repeated after an interval of from four to six weeks. Arsenic is given internally, and if possible the patient is sent to a resort where the waters contain radium, besides being given direct radioactive treatment.

While Doctor Werner does not offer this method as a "cure" and gives no opinion as to the permanency of results, he states that he has been successful in causing the disappearance of mammary cancers in 10 cases, in spite of the fact that in 4 they had become generalized and the lymphatic glands involved. So, also, the neoplasm disappeared in 9 cases of inoperable malignant lymphomata, in 4 of cancer of the lip, 3 of cancer of the pharynx, 1 of malignant tumor of the sublingual gland, 2 of carcinoma of the parotid gland, and 6 of cancer of the face. In 6 cases

of gastric cancer and 2 of rectal cancer, the condition was greatly ameliorated. Also in 5 cases of uterine cancer the tumor disappeared, or nearly disappeared.

Altogether, the results were so promising that undoubtedly other experiments will be made with this remedy, although from the brief abstract it is difficult to determine whether the cholin or the thorium should have most of the praise for the results obtained.

It should be added that cholin is a very important ingredient of nerve lecithin, and for this reason its use as an adjunct to other treatment in cases of cancer is suggested.

ZENKER'S FIXING SOLUTION

The formula for Zenker's solution, employed for fixing microscopical preparations, is as follows: Mercuric chloride, Gm. 5; potassium bichromate, Gm. 2.5; sodium sulphate, Gm. 1; 5-percent acetic acid, Cc. 100.

DIURETIC ACTION OF CALCIUM CHLORIDE IN CHRONIC NEPHRITIS

In 9 cases of chronic hydropic nephritis, calcium chloride (0.1 to 0.24 Gram per day) exerted a diuretic action, according to W. Arnoldi and G. Brueckner, of the Polyclinical Institute of the University of Berlin. (Cf. *Ther. Monatsh.*, July, p. 532.) Curiously enough, the patients for the most part were put on a chlorine-free diet.

CAUSE OF THE IRRITANT ACTION OF DIGITALIS

Investigations conducted by Gottlieb and Ogawa at the Pharmacologic Institute of Heidelberg (Abst. in the *Ther. Monatsh.*, June, 1913) lead them to infer that the gastrointestinal irritation liable to follow large doses of digitalis preparations is the result of some nonremedial constituent of the plant, rather than of any active glucoside. At the time, they were not in a position to make a positive declaration but felt convinced that the peccant agent is a saponin.

The experiments were conducted upon cats, and the drugs employed were digitalis leaves and a digitoxin preparation of digitalis almost free from saponin. The side-effects of digitalis preparations, in the nature of irritation of the gastrointestinal mucosa, may be referred, of course, either to a central action of absorbed toxic doses or to some direct local action.

The time of appearance of the vomiting furnishes the basis of the judgment. Thus, if the result of local irritation, then vomiting will occur within about the first hour after administration; while, if of central origin, this effect will not be observed until some six or seven hours later, and then would be accompanied by general symptoms. But the cats vomited after an average of 85 minutes when given 0.72 Gram of powdered digitalis leaves (equivalent of 1.6 milligram of digitoxin), while an equivalent amount of the powdered glucosidal preparation did not, in 12 experiments, produce that effect earlier than in seven hours.

These experiments, it is argued, indicate that the glucosides are less irritant to the stomach than digitalis leaves, which presumably owe their nauseant action to the saponin [digitonin] contained therein, and which causes vomiting through its effect upon the central nervous system.

GALVANIC TREATMENT OF SCIATICA

Ever since Stanowski recommended (*Deut. Med. Woch.*, 1898) his method of curing sciatica, Doctor Schurig, a military surgeon and an experienced neurologist, has practiced the same with satisfactory results. He has called attention to this method again (*Muench. Med. Woch.*, 1913, No. 33), saying he has had from it uniformly good, in fact extraordinary, results. Proceed as follows:

Apply the anode, measuring 20 by 30 cm., to the sacrum, and the cathode to the sole of the foot of the diseased leg, the pad covering it completely. Now pass through the leg a galvanic current extremely mild in the start and very gradually increased to 8 or 10 milliamperes; at no time must the subject experience the slightest discomfiture. The session is to continue up to one hour, never less than thirty minutes. The electrodes must be well stuffed in order to adjust themselves thoroughly, and also to prevent cauterization.

One great advantage of this procedure is that it may be employed in an absolutely fresh attack. When other treatments had failed, the author always obtained relief from it after a very few hours, and a complete cure in the course of time. However, variations of the current must be avoided. A current of less intensity than named may be used. Failure of the galvanic treatment in the hands of others are ascribed to a wrong procedure: the technic described should be scrupulously adhered to—always bearing in mind the principle of using a mild current continued

over a long time whenever a sedative action is wanted.

HIGH-FREQUENCY CURRENT IN SCIATICA

The author just quoted (see above) also tells of his marked success, in the last few years, with the high-frequency current in sciatica. Here also he attributes failures to incorrect technic; adding that, should occasion present itself, he would not hesitate to resort to this treatment in fresh, acute attacks.

Firmly bandage a wet electrode to the sole of the affected leg, while to the other pole of a bipolar high-frequency transformer is attached a vacuum-electrode. The latter electrode is then passed up and down the course of sciatic nerve, starting at the sacrum, and continuing for fifteen or twenty minutes. As a windup, the vacuum-electrode is moved around for a little while over the region of the sacrum, so as to strike the point of issue of the diseased nerve, while the wet electrode rests upon the abdomen. The current may be full-strength from the first, no unpleasant sensations being produced.

As an illustration of recent occurrence, the author tells how a man was completely cured after 15 treatments who, when first seen, was bent over, using two canes, and hardly could walk to the office. Incidentally this patient experienced marked amelioration, apparent already after a few sessions, of cardiac symptoms (consequent upon insufficiency from aortic aneurysm); his pulse receding, from 100, to 80, and he becoming able to sleep soundly for nine consecutive hours.

Doctor Schurig considers the not altogether danger-free x-ray treatment for neuritis as not needed, in view of the certainty of this more handy and harmless one with electricity.

THE DUODENAL ENEMA: A NOVEL TREATMENT FOR THE VOMITING OF PREGNANCY

A novel, yet logical, method of treating the toxemias of pregnancy, especially the morning-sickness and vomiting, is proposed by Ellice McDonald, who writes in *The Medical Record* for July 18 (p. 102). This clinician is convinced that the chief factor in these toxemias is intestinal stasis, followed by fecal absorption, the latter particularly from the small intestine, and more especially from the duodenum.

During the last eighteen months, Doctor McDonald has treated 12 pregnant women troubled with vomiting, by washing out the intestine through a duodenal tube. He proceeds as follows:

A small rubber tube, of about the caliber of 12 F, with an apical as well as lateral aperture, is introduced into the stomach, the pharynx first being anesthetized by spraying with a solution of cocaine. When 22 inches of the tube has been inserted, 8 ounces of a sodium-chloride solution, a trifle stronger than ordinarily used, is injected. This usually checks the tendency to vomit. Thereupon the tube is pushed still further down, until about 28 inches of it has been introduced. Having loosened her waistbands, the patient now is placed upon her right side, in a semiprone position, and, after waiting a few minutes, suction is made by means of a vacuum-bottle and syringe attached to the duodenal tube, in this way withdrawing some of the contents from the intestine. If bile or intestinal juice is obtained, it is considered evidence that the tip of the tube has passed into the duodenum. It usually requires from five to seven minutes to get the tip of the tube through the pylorus.

At this stage, the physician injects through the tube a liter of a solution containing from 4 to 6 Grams of sodium sulphite. This solution usually passes through the intestine within thirty minutes, causing neither straining or pain, and no anal irritation. It washes everything before it, and the resulting stool is colored with bile and has the raw smell of the intestinal juice. Other salts, such as sodium sulphate, magnesium sulphate, table-salt or sodium bicarbonate may be substituted; however, Doctor McDonald has found the sodium sulphite most efficient in autotoxic conditions.

The author declares that this method of treatment has had an extraordinarily salutary effect in all the cases of toxemia of pregnancy which he has treated. Not one patient has required more than a single treatment, and of the 12 women treated only 1 has vomited after the injection was introduced. Not only has he found it remarkably valuable in the toxemias of pregnancy, but also in other forms of autotoxicosis in which the bowel was implicated; as, for instance, in diabetes and in various kidney and liver troubles.

Doctor McDonald believes that when this method of cleansing the intestine is employed operations for the treatment of intestinal stasis will not be required. He also suggests as a further mode of intestinal therapy

the possibility of introducing various intestinal disinfectants in this manner.

GELSEMININE IN MALARIA

Now that it is known that emetine will kill dysenteric amebæ, Dr. C. G. Roehr inquires (*N. Y. Med. Jour.*, May 30, p. 1110) why some alkaloid of gelsemium may not prove a cure for malaria. He reminds the reader that the old-time reliable observers found gelsemium of value in this disease, and asserts that, whenever the patient can take enough of this old-time remedy, it proves curative in his hands in all forms and all forms and all varieties of malaria, whether acute or chronic. And then he inquires: "How much longer must we wait for an alkaloid of gelsemium that can be used with safety?"

As a matter of fact, such an active principle we already possess in the alkaloid gelseminine, which undoubtedly represents the principal activity of the yellow jessamine. However, so far as we know no extended studies have ever been made of this alkaloid with regard to the possibility of its being a specific for malaria. We hope and trust that some of the readers of CLINICAL MEDICINE will attack this problem and report results in these pages.

Gelseminine is a powerful alkaloid, with a strychnine-like action, and, therefore, must be prescribed cautiously, beginning with small doses and increasing the dosage gradually until its full activity is developed. Possibly in treating malaria better results could be obtained with the combined principles (gelsemoid). We submit the question (with due credit to Doctor Roehr), once more expressing the hope that some of the family will take it up and report.

IS MERCURY THE ANTIPARASITIC CATHOLICON?

An astonishing theory as to the specific action of mercury in all bacterial diseases is announced by Dr. Barton L. Wright, of the U. S. Navy, in *The Medical Record* for July 11 (p. 49).

It will be remembered that some years ago Doctor Wright introduced mercuric succinimide for the treatment of tuberculosis at the U. S. Naval Hospital in Las Animas, Colorado, claiming for this substance a remarkable action in tuberculous cases. His work in this field has led him to the belief that mercury has a specific action, not only in tuberculosis, but also in all the acute diseases directly produced by vegetable parasites. In order to prove curative, however, it is necessary that the initial injection must be extremely large, small and frequently repeated doses not being productive of rapid results.

In infectious diseases, mercury has a dual action: first, it unites directly with the bacterial organism and destroys it; second, it stimulates the animal body to the rapid production of specific antibodies.

In his clinical work, Doctor Wright has been employing mercuric succinimide, for the reason that larger doses of this salt may be injected than of any other salt of mercury; while, also, its parasitotropic property is many times greater than its organotropic advantages.

The initial dose, as already stated, must be very large, the requisite dose for an adult male being about 9-5 of a grain in the early days of an acute infection. At the end of twenty-four to thirty-six hours, if there is no improvement, a second injection, of from 5-5 to 6-5 of a grain is injected, providing symptoms of mercurialism have not followed the first dose. In other virulent and quickly fatal infections, such as cerebrospinal meningitis, the initial dose should be 2 full grains. In chronic infections, the average adult dose is somewhat smaller—from 5-5 to 7-5 of a grain.

In females, the dose should be from 1-5 to 2-5 of a grain less than for males.

Succeeding injections should be given at from two- to four-hour intervals, until ten or twelve injections have been administered; providing the symptoms have not disappeared in the meantime. After ten or twelve injections, the treatment should be interrupted for from two to five weeks, in order to permit of the elimination of the mercury and to prevent the organism from becoming immune to the action of this metal. During the treatment, the oral cavity and teeth must be kept clean, and the bowels must move freely every day. The only contraindication to its use is serious organic disease of the kidneys.

The solution employed is made in the proportion of 1-5 grain of mercuric succinimide to 4 minims of distilled water. This solution is to be injected deeply into the gluteal muscle.

Doctor Wright follows these preliminary remarks with reports of a large number of cases of different diseases treated in this manner with mercuric succinimide. Among these, are 35 cases of tuberculosis, 9 cases of lobar pneumonia, 6 cases of lobular pneu-

monia, 5 cases of typhoid fever, 39 cases of infectious arthritis, 8 cases of rheumatic fever, besides a smaller number of cases of erysipelas, cerebrospinal meningitis, and others.

Of especial interest is his experience with lobar pneumonia. Of the 9 cases treated, 8 he declares were cured by one injection, the crisis usually beginning within about seven hours after the injection, although in several it began within an hour. These injections were given, in the different patients, at different stages of the disease, varying from the first to the fifth day.

In all of his cases of lobular pneumonia, an immediate cure was obtained, although in one the action was somewhat delayed as the result of an infection of the middle-ear.

In typhoid fever, the results were not quite so striking, although really quite remarkable, the disease being cut short in most instances.

In one case of rheumatic fever, when injection was made at 10:30 o'clock in the morning, the crisis occurred at 4 a. m. the next day; at which time all pain virtually ceased.

It will be interesting to learn Doctor Wright's further experience with this remedy, as also the reports of such other physicians as may give it a trial. His earlier enthusiasm with mercury succinimide in the treatment of tuberculosis was somewhat dampened by the adverse reports of many physicians who failed to get as good results as he did. It is too much to hope that we have as yet discovered the catholicon for all infectious diseases.

CALCIUM TREATMENT OF LOBAR PNEUMONIA

A little more than a year ago Dr. E. E. Cornwall made the statement in *The New York Medical Journal* that calcium salts were peculiarly indicated in the treatment of lobar pneumonia. Later, in the same publication (May 30, 1914, p. 1070), he follows up this idea, and reports upon some 54 consecutive hospital cases of lobar pneumonia in which the patients were treated according to his ideas. In this series there were 4 deaths, or a death rate of 7.4 percent. Of the 4 who succumbed, 1 at least was an alcoholic, a man 49 years old; one was a woman of the same age who was moribund when admitted; another, a man of 58, had pulmonary edema at the time of admission, and a badly dilated right heart; the fourth to die was a boy of 11, who succumbed the day after defervescence from an undetermined cause.

The peculiarity in the treatment of these patients by Doctor Cornwall consists, first, in the insistence upon a nonputrefactive diet, and, second, in the inclusion of a sufficient quantity of the mineral salts, especially those of calcium, to make up the deficiency usually present in pneumonia.

The administration of these salts Doctor Cornwall considers of fundamental importance. At 8:30 in the morning, he gives 10 grains of calcium chloride, dissolved in 5 ounces of water; and this dose is repeated at 12:30, 4:30, 8:30, and at 11:55 in the afternoon and evening—making a total of 50 grains of calcium chloride in twenty-four hours. In addition, the patient is given at least 35 grains of sodium chloride, 95 ounces of water, and food to the amount of 1200 calories, the protein being cut down to 38 Grams. The diet consists principally of milk and barley-water, together with orangeade sweetened with milk-sugar. All food and liquids are given through a tube, without the patient being allowed to raise his head. Instead of the milk and barley-water, the patient may be allowed to take lactic-acid milk, peptonized milk or one of the predigested cereal baby-foods, dissolved in water. After defervescence a more generous diet is allowed, but the calcium chloride is continued until the fourth day after defervescence.

Doctor Cornwall advises extreme caution in the use of cathartics, although at the beginning of treatment, if the bowels have not moved in a reasonable time, a laxative should be administered. However, after the patient has been placed upon the limited nonputrefactive dietary recommended, the bowel contents generally are harmless.

Of course other remedies are employed as indicated, especially stimulants; those most frequently required being strychnine, caffeine, and digitalin. In extreme dilatation of the right ventricle, venesection is resorted to.

LIQUID PETROLATUM IN THE TREATMENT OF CONSTIPATION

One very striking effect of the work of the English surgeon, Sir W. Arbuthnot Lane, in developing interest in intestinal autointoxication, has been the reintroduction of liquid vaseline (liquid petrolatum, or Russian mineral oil of the Codex) as a remedy for constipation. Lane claims special advantages for this remedy, because it acts in a purely mechanical way, anointing the bowel and thus facilitating the passage of fecal matter, while, yet, not causing increased peristalsis

The *Province Médicale* for March 14 (p. 115) has a very interesting article upon the use of petrolatum in the treatment of constipation. According to the writer of this article, both vaseline oil (liquid petrolatum) and the official vaseline may be employed; but the former is to be preferred. This is the liquid obtained (according to the Codex) by treating Caucasian petroleum with sulphuric acid and then with soda, distilling off the product at a temperature between 335° and 440° C.

The writer of this article advises that the liquid petrolatum be taken early in the morning, removed as far as possible from the first meal—a full hour before, by preference. Taken after eating, the substance is said to act less favorably, and also may cause a sensation of heaviness at the stomach.

While liquid petrolatum commonly is used plain and is not unpleasant to most people, it may be rendered more palatable by the addition of some aromatic or an essential oil, black-cherry liqueur, for instance. Admixture with a syrup of raspberry or black currant serves the purpose nicely. The dose is, a tablespoonful in the morning on rising. However, often it is necessary to double these doses, and in beginning treatment it may be desirable to give larger doses for two or three days.

Petrolatum thus used is not absorbed in appreciable quantity, its action being purely physical and is exerted upon the entire length of the intestinal canal; in this respect differing from the vegetable oils, of which the larger part is digested and absorbed. Petrolatum modifies the consistency of the intestinal contents, lubricates the bowel, and thus facilitates the progress and expulsion of the stool. It also has a sedative action, allays intestinal spasm and delays toxic absorption. It is, therefore, especially indicated in cases of constipation accompanied by some degree of intestinal irritation and spasm.

The writer in the *Province Medicale* recommends the use of petrolatum in the treatment of hemorrhoids, prostatic disease, mucomembranous colitis, enterocolitis, hepatic insufficiency, and in the constipation of women suffering from uterine retroversion. It also seems to be useful in chronic appendicitis as well as in the constipation of typhoid fever, and also following operations upon the abdomen; indeed, in all conditions in which the employment of olive oil heretofore has been considered desirable, particularly in the treatment of hyperchlorhydria and its consequences.

The writer believes that the introduction into pharmacy of chemically pure liquid petrolatum will permit of the extending of these indications. He suggests its trial in diverse infectious diseases of the intestine, in the treatment of patients troubled with intestinal worms, as well as in pulmonary tuberculosis, in which it seems to be of value, for some reason difficult to explain.

ONCE MORE ABOUT IODINE AS A HAND DISINFECTANT

More and more iodine in solution seems to be gaining in popularity and wider application as a disinfectant at surgical procedures; now a simplification of its mode of using is being advocated by a French surgeon, Billet, who writes about his method in the *Gazette des Hôpiteaux* (1913, No. 146); his modification making it eminently applicable in emergency accidents and especially on the battlefield.

The special point of advantage in Billet's method is, the omission of first scouring one's hands and arms with water and soap, and merely treating the skin with the iodine lotion.

According to this experimenter, a 1 : 2000 solution of iodine in alcohol constitutes an antiseptic of the first rank and will effect complete asepsis within a very few minutes; furthermore, it may be applied as often in succession as desired without hurting the cuticle. As for prior washing with soapsuds, that not only is superfluous, but may even, it is asserted, sometimes prove injurious.

NEW METHOD OF HEALING FETID ABSCESSES

F. Steinmann, of Berlin (*Proc. Congr. Germ. Surg.*, Berlin. cf. *Muench. Med. Woch.*, 1914, No. 22), recommends a new method of curing stinking abscesses by means of an uninterrupted current of oxygen or, failing that, of air.

Pass a rubber drainage-tube clear to the bottom of the abscess, then into the tube insert a smaller rubber catheter connected with a tank containing oxygen or compressed air; continue blowing for a length of time. Such a current dries out the channel, helps to blow out the secretion, and kills the anaerobic bacteria. Secretion and odor rapidly diminish and completely disappear in a few days; while the duration of the treatments may be shortened from day to day. The cure is claimed to be advanced by one half or more.

Another speaker—Tiegel, of Dortmund—advocates favoring drainage of abscesses by holding them open by means of a specially

constructed clamp, to be inserted into the wound in place of the customary tampon; the latter tending to hold back the foul secretions, besides excluding the air, while his clamp acts in an opposite manner. Healing occurs much more rapidly.

In this connection, Doctor Kuhn reminded the hearers of the beneficial action of sugar in suppurating wounds; at the same time suggesting that presumably the acids derived from the sugar neutralized the alkaline state of the cruror and thus removed an element favoring the noxious action of the toxins.

SOURING OF MILK DURING THUNDER STORMS

There has been much speculation over the reason why milk often sours and curdles so rapidly during thunderstorms, and it is now generally agreed that it must be the prevailing electrical conditions. Now, however, an investigator, A. Trillat, claims to have found (quoted in *Pharm. Jour.*, 1912, p. 345) another active factor in this phenomenon.

The gases of putrescence, Trillat asserts, accelerate the generation of acids in the milk when atmospheric pressure is reduced. Of course, the humid heat of the sultry weather is a further favoring element for the microbic proliferation, and then, under reduced atmospheric pressure, putridity-gases are more abundantly liberated, with the consequence as stated. This, Trillat believes, is a more potent cause than electricity.

The same conditions naturally hold good for the spoiling of meat. The author also suggests that this fact may account, not infrequently, for the sudden appearance of infectious diseases.

RELATION BETWEEN OVARIAN HORMONES AND THE UTERUS

Benthin has been investigating the interrelation subsisting between the internal secretion of the ovaries and the physiologic processes of the womb, and has presented his deductions, from his experiments (upon animals), to the Society for Scientific Medicine of Koenigsberg (cf. *Muench. Med. Woch.*, No. 22).

The ovarian hormones, we must assume, are deposited in the mucosa of the womb, where they produce a hyperemia and thus render it adaptable for conception; however, they are of limited importance for maintenance of the gravid state, inasmuch as only during the earlier months will this operation lead to termination of the pregnancy. During pregnancy degenerative processes (hypofunctioning) are observed in the ovaries.

This latter fact, by the way, suggests that possibly the recession of myomatas during the menopause is connected with this; while, on the other hand, myomatas not infrequently are associated with hyperplasia of the ovaries. Furthermore, in osteomalacia, the interstitial tissue of the ovaries is found to become markedly developed.

The author further finds that the corpus luteum plays an important role (1) in the implantation of the ovum, and (2) in the formation of the placenta. After removal of the corpora lutea the course of the pregnancy is terminated, and there is no recurrence of menstruation.

Applying this knowledge practically: Taking note of the connection subsisting between certain anatomical changes and pathologic phenomena, clinicians began to administer ovarian preparations for acromegaly and preparations of the hypophysis in protracted hemorrhages.

Similarly the suggestion now presents itself, to give trial to extract of corpus luteum in premature incidence of the climacterium, as also in dysmenorrhea and related disorders.

NEW REMEDIES

Novatophan.—A London firm has brought out a synthetic as a superior substitute for the atophan of Schering, being a substitution-product of the latter. It is claimed to be the ethyl ester of methylated atophan, and, being insoluble in water, is tasteless. It is marketed in tablet form.

Melubrin.—This is one of the latest derivatives of salicylic acid, and is being praised by various writers in the German exchanges as especially efficacious in acute articular rheumatism. One of its essential advantages of related products claimed for it is, that it acts less upon the sudoriparos apparatous.

Embarin.—This is a water-soluble organic mercury compound pushed by the firm of Hayden, and German syphilographers are according it praise as a remedy in lues; one of the latest to write about it being Salomonski, of Berlin (*Muench. Med. Woch.*, 1913, No. 36), his trials covering more than 30 cases. While in a certain percentage severe symptoms (evanescent) of irritation proved objectionable, the others bore the injections (from 4 to 6 in all) without complaining. The curative results were satisfactory.

Miscellaneous Articles

How to Become Acquainted With the Alkaloids

THERE are many physicians who think that for them to adopt active-principle medication and to change from the old to the new would entail a great deal of study and trouble. In fact, this was the writer's own argument a few years ago. However, this is a grave mistake. The use of the active principles is really much easier than one would at first suppose, and their certainty of action makes prescribing them a pleasure. The physician who prescribes the old galenic products does so hoping that they will produce the results he desires; but when he prescribes the active principles he does so *knowing* that the results sought will actually be accomplished. There is no need for guessing or hoping that the results will be what you desire; results for good are sure to follow if you have diagnosed correctly and have prescribed intelligently.

It matters not to which school you belong, you will find that the active principles will make your practice easier and your results surer. Every physician owes his patient the very best known in medicine, and he does not fill that obligation unless he gives his patients the active principles. When you have prescribed them a few times and carefully noted the results, you will not hesitate thereafter.

To those who are skeptical, or doubt the efficacy of the alkaloids, or are prejudiced in any way toward this definite therapy, this writer will say: Just try a few of the active principles, using the same careful judgment you would when prescribing your own favorites out of the old list, then note results carefully. If you are pleased with these, as you are sure to be, then take up the study of a few more.

It is a mistaken idea to think that you must make the change all at once. In fact, the writer believes that it is more fair to the physician and the alkaloids to make the change very gradually. You can study the active principles, and at the same time use the older remedies where you are not sure of your ground. As a matter of fact, it is believed that the real physician should always be ready to use that which will do suffering humanity the most good, always be ready to select that which will relieve or cure your patient in the shortest time and do it with the least possible risk, no matter where these remedies come from; whether the mineral, animal or vegetable world, or from the earth, sea or sky. No "pathy" or "ism" should debar the physician from selecting that which he believes or knows will be best for his patient.

Then, again, he should ever be ready to study and investigate and prove for himself where the claims of other men are true or false. Especially should this be so in reference to the claims made as to the therapeutic virtue of certain remedies.

The writer is sorry to say that there are some men in the profession who say, "The old way is good enough for me;" they have no time to study "these new fangled ideas," for they have evolved from the brain of some one who expects to reap a harvest therefrom.

Now, we do not deny that such may be the case in certain instances and with reference to isolated remedies, but, if the alkaloids are referred to, we must say that the reference is absolutely wrong. Not only one man or one dozen men, but hundreds—yes, thousands—of honorable physicians claim that they are more esthetic to handle, easier to give and easier to take, more convenient to carry, more economical, and in their therapeutic virtues vastly superior to the older products. Surely, these claims should carry enough weight to cause any physician who has his patient's best interests at heart to investigate, and to investigate thoroughly.

In conclusion, the writer will say, if the reader will do this, he feels sure that he will be a staunch friend of the alkaloids thereafter.

C. W. Canan.

Orkney Springs. Va.

[Doctor Canan is absolutely right, of course. That the active principles are vastly superior to the galenic preparations, from every point of view, every doctor who has actually used them for some time in practice will assure you. The trouble is that the average man balks at the change. He is afraid of himself—over conscious of his own ignorance. Just get him started—just get him to learn how easy it is to use this class of remedies (and how satisfying) and he becomes an enthusiast.

The right plan to follow is that advised by Doctor Canan: "Just try a few of the active principles, using the same careful judgment you would when prescribing your own favorites out of the old list, then note results carefully."

May I suggest a few that you may well begin with? Here is a short list:

Aconitine. This is the remedy "par excellence" (as Burggraeve used to say) for all the sthenic fevers. It is useful in the eruptive fevers, colds, bronchitis, and a horde of other diseases.

Digitalin. The most powerful heart tonic. Its uses are well known to you, of course. Combine it with the aconitine in asthenic types of hyperthermia.

Strychnine arsenate. The best salt of strychnine for permanent restoration of tone. The arsenic radical gives it a blood-building power not possessed by most of the strychnine combinations.

Atropine. It has many indications (see Doctor Redfield's article this issue) but the most important uses are *arrest of spasm* (from whooping cough to enuresis, including all spasmodic pains), *arrest of secretion*, and to control conditions inducing temporary *pallor of the skin*—due to vascular spasm. It is of great value as an emergency remedy; and in arresting hemorrhage it has only one rival—emetine.

Glonoin (or nitroglycerin) is not an alkaloid, but it is an emergency remedy which every "alkaloidist" carries with him. For fainting, shock, or struggling heart it is indispensable.

Podophyllin is our best vegetable laxative. It is usually given in association with *calomel.* and followed by a laxative saline. Sometimes *aloin* is preferred, or a combination of laxatives, such as are obtainable in Waugh's anticonstipation granule. Several good laxatives should be in every doctor's case.

Codeine is the best all around single anodyne. It is not as powerful as morphine, but it disturbs secretion less, and is better for children. The anodyne for infants granule makes a nice combination, which not only can be used to relieve baby's colic, but also mother's cough.

Arbutin. The best vegetable diuretic and (in a limited sense) urinary antiseptic we know. Yet how few the doctors who are acquainted with and use this "precious remedy"—quoting Burggraeve again.

I might lengthen out this list indefinitely; but, like Doctor Canan, I am anxious to persuade you to begin with a few of the active principles. Get a little case filled with some of these remedies, put it in your vest pocket ready for emergencies, and test the alkaloids in your own work. Even if you prescribe ordinarily you will find many conditions where the case and its contents will be mighty handy to have with you.—Ed]

THE USE OF EMETINE FOR AMEBIC INFECTION

The patient in this case was my wife. She had been in good health up to two years ago, then became infected with amebiasis from eating fresh vegetables during the early fall months of 1912 while we were residing in Belgian Congo, Africa. The first acute symptom was a severe hepatitis occurring in November. The dysenteric ameba was found in the stools. Mucus was present, and more or less bowel irritation, but no active diarrhea. We at once embarked for England, reaching London during the later part of December.

Several small doses of extract of ipecac were given during our voyage. The hepatitis improved, but the colon and appendix became more involved. In London, Doctor Daniels, Sir Patrick Manson's associate, examined the patient and prescribed emetine hydrobromide, to be given intramuscularly, 1-6 grain twice daily. We started for the United States in three days. Owing to very stormy weather on the ocean, besides insufficient facilities, only a few doses of the prescribed remedy were given. We reached an Omaha hospital in ten days.

The internists at the hospital were not familiar with emetine treatment in amebiasis, so, it was not continued by them. Instead, extract of ipecac was administered in enemata by means of Eichhorn's duodenal tube, and also in the form of salol-coated pills, according to Simon's method. Both these methods caused a good deal of disturbance and were difficult to carry out. Nevertheless, improvement followed and the patient left the hospital after six weeks, although not entirely recovered. About four weeks later came the first

relapse, with hepatic tenderness, griping in the colon, mucus in the stools, tenesmus, and a slight elevation of temperature.

As I had then become more familiar with the emetine therapy, through reading in *The British Medical Journal* of Rogers' experience, I again started to give the alkaloid. I gave emetine hydrochloride, 1-3 grain twice daily, intramuscularly. All symptoms cleared up in a few days, and they did not reappear for the next four months. At the end of that time (during the latter part of July, 1913), the patient was confined. It was an extremely difficult labor, and very bad lacerations occurred. As a result, the colon became partly paralyzed and no bowel movement occurred for ten days.

This constipated condition was highly favorable to a relapse of the amebic infection, and it promptly followed. The amebæ were swarming in the stool. Emetine was again given by the usual method, increasing the dose to 2-3 grain twice daily, until 6 grains were administered. The mucus, griping, and tenesmus of the bowel promptly disappeared.

The effect was not permanent, so that a slight relapse occurred about once every four weeks during the next six months; however, a few doses of emetine dispersed all symptoms after each such attack, until the latter part of March of the present year. Then began a periodic rise of temperature, which continued about three days a week; then subsiding, to reappear the following week. The temperature never exceeded 103° F. The hepatic region now was very tender, and at times the pain was extremely severe. There was also a good deal of griping and tenesmus of the bowel; the amebæ also again were present. Emetine was given from time to time, with varying degrees of success. During this time the patient was also suffering from a suppurative kidney.

After ten weeks' illness without making much headway in the treatment, one of my former preceptors advised me to try larger doses of emetine, and this was done. Twice daily 1 1-3 grains of the alkaloid was given, hypodermically or intramuscularly, until at length nausea became pronounced. Then the dosage was reduced to 1 grain twice daily, and continued at that until 14 grains of the drug had been given. This controlled the unfavorable symptoms for two weeks, after which the temperature again began to rise. Then the patient was taken to Omaha and an operation performed. A suppurative kidney was removed. The liver was explored, but appeared to be in a healthy condition.

Since then there has been a gradual improvement, and in spite of the severe operation there has been no relapse. But, at the last examination of the stools, about two months ago, the amebæ still were found present.

The total amount of emetine given at different periods will aggregate about 36 grains. I believe emetine is destructive to all amebæ in the system, except those in the intestinal canal.

ANTHONY PARSONS.

Valley, Neb.

[The specific action of emetine in dysentery has been conclusively demonstrated. It is now known to be a positive cure for amebiasis; yet in severe types there is a tendency for the disease to recur. To prevent this, it is now the general practice to repeat the course of treatment after an interval of a month, and again at a like interval, even if no symptoms of dysentery are present. If this method is followed, in an overwhelming majority of cases the disease can be completely eradicated. A daily dosage of from 1 to 1 1-2 grains, given in two or three injections, is usually sufficient; and a few days continuous treatment is generally desirable at each interval.

Enemata containing emetine, to cause the destruction of the amebas in the bowel, have been tried, but have proven too irritant. When local applications seem indicated, quinine solutions may be used to wash out colon and rectum. This substance is markedly amebicidal.

Doctor Parsons' wife was peculiarly unfortunate in suffering from a complication of disorders. When we consider that beside the dysentery she went through labor, and had a pus kidney removed, all within a few short weeks, it is really remarkable that she made such a rapid and happy recovery. Cases like this intensify our faith in emetine—a wonderfully useful alkaloid whose great value we are just beginning to comprehend. —ED.]

DAEMMERSCHLAF, DUMMERSTREICH, UND KOPFLOSIGKEIT

The three foreign nouns constituting the headline might be translated as "crepuscular lethargy, a silly trick, and headlessness." But, why the German title? O, just because it goes so well. Has not the whole profession

been fairly hypnotized by the output of dye-works under the mellifluous title of farben-fabriken? Is it not now to be robbed by the word daemmerschlaf? Is not a thing, well known and widely used in general but neglected by maternity hospitals, to be appropriated, advertised, and the public educated to the belief that it can be found only in certain particular hospitals, as named in the reading-matter in the lay press? Is not the medical profession debarred from utilizing that press, and, so, because of this enforced silence, necessarily looked upon as ignorant?

One thing, at any rate, is very certain—Kopflosigkeit (headlessness) is *not* manifested by the astute exploiters of the profession. CLINICAL MEDICINE for August contained a fairminded editorial on the subject of Daemmerschlaf. It was written in answer to a question, and it was quoted by *The Literary Digest;* however, the very nub and heart of the matter, the statement that members of the CLINICAL MEDICINE "family" were exempt from certain strictures, was omitted from the quotation. Apparently no headlessness here—still, that may depend upon the "point of view."

Most women desire to get their babies at home. Yes, and they have done so in comfort for many years, thanks to hyoscine-morphine. But, think of the lure of the much advertised, "something-new," sleep, which must be surrounded with "very special precautions and most unusual vigilance." If you, doctor, have used this hyoscine-morphine sleep for years, say so, and see how many believers you can find. Is it a lure? Yes. A silly trick? Yes.

But, anyone who banks on German ignorance is a sure loser. The whole scheme of daemmerschlaf may be thin, gauzy, and ridiculous, but it will work; perhaps not up to the high level of "farbenfabriken," still very nearly so. Are Germans and German doctors fooled? Not for the infinitesimal fraction of a second. Kopflosigheit is not one of their characteristics. They understand well the mark "Exporten." They need it in their business: for marking things not for home consumption. Headlessness of great intensity, especially the medical-subject variety, is an American product and gives point to the German proverb, "Stupid sheep will sleep many in one stall."

To sum up: The medical profession has a good thing in its hyoscine-morphine-anesthesia. This method has not been employed in large maternity hospitals to any extent. The profession is to have its good thing nullified by a lay-press crusade designed to educate the public to go to certain places to receive treatment which the nearest physician as a rule can administer. A silly bluff? Certainly. Will it carry through? Also certainly.

I just wished to say to the CLINICAL MEDICINE "family": "Boys, you are done! What are you going to do about it?"

DOUGLAS H. STEWART.

New York, N. Y.

[In New York, we understand, special maternity service, with Freiburg trained doctors, is already being provided in certain hospitals. Nevertheless, we are sure that most American women will still prefer to have their babies at home, under the care of doctors who know how to afford painless delivery under natural conditions and congenial surroundings. Read Doctor Ellingwood's article, this issue.—ED.]

AN OPENING IN CHINA

Two million people, and only one doctor. Seven doctors, each with a territory holding two million souls. These are the facts of the medical situation in the part of China around the American Board's Shansi Mission. In addition to the surgical cases which are brought from many miles distance to Dr. Percy T. Watson at the Board's dispensary in Fenchow-fu, the prefectural city which is the Shansi Mission's headquarters, there are many out-stations where patients are cared for in school-rooms, in inn-yards or wherever the doctor can find a vacant room when he is on his tours, while seven or eight opium-refuges are managed from Fenchow-fu.

TWILIGHT SLEEP, PREJUDICE AND IGNORANCE

I have just read what you say, in the August number of CLINICAL MEDICINE, about the letter received relative to the matter of American physicians not generally using hyoscine and morphine to make childbirth painless.

Perhaps one may not blame the woman for writing as she does, and there may be some excuse for writing as she did, but there are many things to be said on the other side.

I read that article in *McClure's* to a woman within a month of her confinement and told her that I had made use of that treatment for years. Do you think she called upon me to

confine her? Indeed, not; but she did, against her husband's wishes, employ one whom she had no reason to suspect of using the treatment. It made me quite hot when I read the article, and, she being in my home at the time, I read it to her and commented forcibly on the injustice of printing anything like that without knowing whether or not there were hundreds of physicians in this country making use of the same method.

There is no doubt but that many women financially able to do so will go to the trouble of a trip to Europe for confinement, when they could have the same drugs administered to them here in hundreds of places.

It is easy to blame the doctor for almost everything, no matter whether he is to blame or not. I always offer to administer chloroform in my cases of confinement, but in more than half of them it is absolutely refused, as is hyoscine-morphine, even after I assure the woman that there is virtually no danger, while it does make a vast difference in the pain experienced.

It is about the same when I offer to use the forceps. Over and over again good old Father Grosvenor told us that the forceps were benign in the most benign cases; and I firmly believe that is true in every case where the physician knows how to handle the instrument properly, at least, where he knows enough not to damage with them. However, more often than not, when I propose using the forceps, explaining that there will be no possible harm and that there will be hours of suffering saved, in many cases—and enough times to make it well worth while in most cases—I am not permitted to resort to them.

Now, I ask, how in the world can a physician, no matter how up to date and willing he may be, give the best service when the patient balks? There may be some physicians who do not believe in mitigating the pains of childbirth, but I think most of them are of the other sort. The greatest trouble is that most lay people think they know so much more about proper treatment that they almost invariably block the doctor's best efforts, and then, if the results are not all they desire, they do not hesitate heartily to berate, if not curse, the doctor.

And where mainly do they get all this great knowledge (?) if not from just such articles as the one in *McClure's?* The people do not stop to analyze the matter. They have come to think that what they read in high-class magazines is authoritative; yes, even what is printed in the daily papers is fully believed by most people, no matter if the one who wrote it simply intended it for a joke. I have often said that one can become well informed if he will read the daily papers, for they print much splendid information; still, it is necessary to discriminate intelligently between the probable and the improbable.

It is astonishing how otherwise sensible people will freely offer advice upon subjects about which they know nothing. And these persons, if asked when and where they qualified themselves to give such advice, will promptly deny ever having made a study of the subject.

Oftentimes this thing does not work any particular harm, but there are cases where they influence others to change treatment, when they are receiving the very best to be had, and when, if this treatment is not continued, they will lose their lives. If one were to call such an adviser a murderer, he would feel hurt, to say the least; yet, he is certainly as much to blame for the death of the one who accepted his advice as though he had killed him outright.

It is the same old story—ignorance is at the bottom of nearly all woe, and the saddest part of it is that most people refuse to be enlightened. People—almost all people—are hypnotized by their beliefs. It is highly unnecessary for them to *know* things, they are more than satisfied to cling to and be governed by their beliefs, irrespective of how false they may be. And woe unto the one who ventures to assail their beliefs!

And right here I cannot refrain from giving the medical profession another rap. Just as you say, Mr. Editor, the majority of them are opposed to any change or innovation. I say it in all kindness: there are in the medical profession many of the worst bigots on earth. They, too, are governed by their beliefs, not realizing that no one has a right to continue blindly believing anything indefinitely. In time, one should be able to prove things; and then he *knows*, it is no longer a mere belief. If medical men generally did their duty, if they informed themselves as they should upon all subjects on which they profess to be authorities, there would be such a great change that lay people would be less likely to presume to encroach upon matters which only medical men should deal with. They would realize that they were not competent.

But, when it is absolutely true that there are many duly authorized and legally qualified medical men whom the average woman of experience and intelligence can excel in many

things pertaining to their work, it is not strange that after awhile these women, as well as many others who know of such instances, come to feel that they have a right to advise—more particularly when their advice is free, while that of the medical man is considered expensive.

What reasonable excuse can a doctor of today give for not being up in his work? Surely, there are facilities for learning all that should be known, and as yet the people will permit a doctor to practice upon them. However, it appears to me as though that time were drawing to an end, and rightly so. Even a beginner now has little excuse for not having information that should be easily put to the test which would convert it into knowledge.

Wide publicity is a splendid thing in case of correct information, but, when newspapers and magazines publish articles on subjects of which their editors know nothing, nor do those who wrote them, it is to be regretted that they do not seem to appreciate the great harm they may do.

E. W. Feige.

Woonsocket, S. D.

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[There seems to be a principle involved in the doctor's communication which pertains, not only to the twilight sleep discussion, but to every item of the physician's work, namely, that he is obliged to be more than a mere repository of knowledge and skill and armamentaria if he is to successfully practice scientific and up-to-date medicine; he must be a psychologist, with the knack of dealing with men and women and of instilling into them—even imposing upon them, if necessary—confidence in, and compliance with, his requirements.

Most patients, especially women patients, will resist, or at least protest against, diagnostic and therapeutic procedures with which they are not familiar, or which involve fancied risk or embarrassment; and it is part of the physician's task, not only to stand ready and able to give them the benefit of such procedures, but to persuade, even to the point of insistence where it seems necessary, these reluctant individuals into accepting them. Most women will object to a physical examination, for instance, where they have never undergone one before. But a little intelligent psychology will usually overcome their unwillingness, and even bring them to a point where they desire it.

No doubt other practitioners are experiencing the same attitude on the part of their patients in regard to the twilight sleep that Doctor Feige is having. It is a place for the exercise of the psychological factor. Once the objection is overcome and the advantage of the sleep is experienced, two results flow out of the experience: the patient is convinced of the benefit of the procedure, so that she will demand it at her next confinement, and she acquires added respect for the physician both for his skill and for his firmness. So far from regarding this "balky" attitude of the patient as a defeat, and becoming discouraged over it, we urge our correspondent, and all of our readers who are having similar experiences, to look upon it as an opportunity for making a conspicuous conquest; for one such resisting patient overcome and won over is of more value to the cause and to the physician's reputation than ninety-and-nine that need no winning.—Ed.]

EUROPEAN IMPRESSIONS

In the latter part of July we were in Paris. How one's preconceived impressions of persons and places collapse in the presence of the real! I was prejudiced against Paris—for what reason, I do not know—and, yet, I enjoyed it the most of any city visited.

Paris is beautiful. Its parks and boulevards and its famous galleries and buildings, rich not only in works of art but in historical associations, appealed to me very much. It is essentially a Latin city, and many times I was reminded of Havana and other cities of Latin America.

The one "fly in the ointment" was the public flaunting of vice, not alone by the women of the street in plying their trade, but by men as well. In no other European city have I been accosted by women—and men—of the street.

Some of the principal streets were lined with petty gambling-devices and frivolous amusements, with all the gilt and tawdry glamour of a circus. I wondered, as I observed the inferior size, the dandified dress, the effeminate appearance of the men on the streets of Paris, whether they would be able, physically, to uphold the glorious record of the Frenchmen of other days.

Another striking impression was, the absence of games that called for physical exercise—no baseball, no cricket, no tennis; nothing of the kind save horse racing. Still, Paris is not France, and it is to those who labor and live upon the soil that all nations must depend for a physically vigorous people.

From Paris, we passed over the beautiful rolling fields of north-eastern France. The peasants were cutting fields of fine alfalfa and grass for hay. Patches of rye and wheat were beginning to grow golden ripe, for the harvest. It is difficult to imagine this beautiful farming-region now devastated by war: the pleasant homes are blackened ruins; the wheat, rye, and oats have furnished fodder for cavalry- and artillery-horses or have been trampled into the ground that has been saturated with human blood.

Leaving France, we came to the "lowlands" of Belgium, and then, the familiar words of Cæsar vividly came to my mind, "All Gaul is divided into three parts, one of which is inhabited by the Belgii"; while now, after reading of the heroic defense of Liége, one also recalls that further statement, "Of all the inhabitants of Gaul, the Belgii are the bravest." We had seen many soldiers in Paris, but supposed that to be a normal condition. When we reached Belgium, the movement of troops was very pronounced. Even at the Hague as we were visiting the Peace Palace batteries of artillery went rumbling by.

Proceeding to Holland, we found the streets of Rotterdam filled with sturdy Dutch—the young, excited, the older anxiously watching the bulletins relating to Germany's declaration of war against Russia and France. The reserves were flocking to the colors, among whom there were fair haired, rosy-cheeked boys, some no taller than the rifles they toted. Officers were commandeering horses, and the peasants' wagons were left useless in the streets. Returning from a visit to the National Serum Institute, we found our hotel had been taken for military headquarters. It was interesting to note the effect of war conditions upon the various tourists. Some thought the whole thing a joke, others wanted to appear as heroes and assert their "rights as American citizens," while the philosophical ones made the best they could of the inconveniences of war.

We sailed from the Hook of Holland, and when in time we steamed into the harbor of Harwich, England, a fleet of scores of destroyers with steam up were tugging at their anchor-chains like dogs in the leash eager for the chase. The scene impressed one with Great Britain's naval power and its readiness for action.

All London, and probably all Britain, was laboring under a great strain. No one seemed to doubt that Great Britain would keep her pledge to Belgium; still, one could almost hear a national sigh of relief when the die was officially cast. There was little excitement in London. Crowds gathered in front of the War and Admiralty buildings, on the Strand, and in Trafalgar Square, but I do not recall hearing a band play. The only music heard was the call of the bugles, the only cheering, when the King or some cabinet minister passed in the street. There seemed a grim, determined, bulldog spirit in the air. Regiments of strong, vigorous young men in khaki and Scottish regiments in kilts went marching away to an unknown battle ground.

There was a "do or die" spirit that was mighty impressive. From Australia, Canada, India, and the "Islands of the Sea" came a loyal response to the Empire's battle-cry. Great Britain was preparing very methodically for a long and terrible contest, but there was no shrinking. I heard many expressions from Britons, that there was no bitterness against the German people—only against the "war lord" and the military despotism that had threatened the peace of Europe so long and imposed such heavy burdens of armament. There seemed to be the feeling that when the great conflict was over it would make for peace. My one great and lasting impression of England is of a people who realized to the fullest what a terrible struggle confronted them, and they were making the sacrifice with a grim determination after having counted the cost. They were in no doubt as to the final result.

At the hotel in London, I met my friend Professor S., a young German college professor who had been in the United States a year. He had come to London to attend the International Veterinary Congress, only to find a call to join the German colors. He said, with tears in his eyes, "I don't want to fight," but in an hour he was on his way to the scene of war.

We returned to Halifax, N. S., second-class on a freight steamship, stopping two days at St. Johns, Newfoundland. Here the naval reserves with sea-tanned, weather-beaten faces and hands horny from handling ropes were flocking to their ships. They marched down the hilly streets to the wharf, with the "rolling gait" of those used to the sea.

At Halifax, the "colonial troops" were leaving for "over-seas." Long-limbed, clean-cut fellows were saying "goodby." Soldier husbands hugged their little ones in their arms as they marched to the station, while dry-eyed anxious wives walked beside them

or sweethearts, with tears and smiles, bade their lovers "God-speed."

All the little villages in the French-Canadian provinces were sending companies of young men to war with cheers and music. Here, the the band was playing martial music; here the cheering crowd, the torches, and excitement; but as the train rolled away into the night there were many aching hearts that stayed behind.

In lower Canada, there was scarcely any excitement, but we saw trainloads of khaki-clad, business-looking young Canadians, all responding with set, determined faces to the call of duty, to give their lives, if need be, for "Our king and empire." We could not resist the call of race, and we gave them three hearty American cheers of "good luck and God-speed" as their train rolled away toward the sunrise.

N. S. Mayo.

Chicago, Ill.

OSLER'S SPOTS

Two recent cases, both young men, who were not well, but still working, one in whom the endocarditis was known to exist, and the other in whom it was only discovered after examination, are the occasion of my calling attention to this apparently little-known sign.

Apart from ordinary subcutaneous edema, in cases of cardiac dropsy there are a few phenomena to be observed in the skin and subcutaneous tissue, which are dependent on some form of cardiac disease. One is very important, inasmuch, as far as I know, it is only met with in heart disease and is of diagnostic importance, since it not only, certainly, indicates the presence of heart disease, but the nature of the disease from which the patient is suffering. I refer to Osler's sign. In cases of chronic or subacute malignant endocarditis, minute, circumscribed, painful, erythematous swellings occur in the skin and subcutaneous connective tissues, especially of the hands and feet. They are painful on pressure and gradually disappear in three or four days, to a week or more. Each of these spots or lumps is due to a local acute inflammatory exudate around a capillary or (possibly in the case of the larger lumps) an arteriole which has suddenly become plugged by a minute infective embolus from a vegetation in a heart affected with endocarditis maligna linta.

In such cases the infective agent, though pyogenic in character, seems unable to excite suppuration in any of the embolic infarctions which occur in the skin or elsewhere, lungs, spleen, kidneys, brain. The failure to cause suppuration may depend on low virulence of the organisms, or on the nature of the resistance in the blood and tissues of the patient. The minute cutaneous foci in question, may not be always due to an actual embolus from a cardiac vegetation, but to a local stoppage of microbes circulating in the blood, setting up a circumscribed acute inflammatory process about the wall of the capillary or arteriole on which the organisms have lodged. I am not aware that any of the little painful spots or lumps have been satisfactorily examined with the microscope.

Osler thus described what are now known as "Osler's spots." They vary considerably in size, from a pin head to a small pea, and may or may not be raised above the level of the skin. They also vary in color. These differences depend on the severity and stage of the local inflammatory process and the depth of the focus below the surface of the skin. The smaller and redder the spots, such as are generally seen on the fingers, probably arise when the inflammation is very superficial, while the larger and less highly colored tender lumps, up to the size of a small pea, occur when the focus of inflammation is more deeply seated. The larger ones last a few days longer than the smaller ones. The smallest appear as punctiform erythematous spots on the tips of the fingers and elsewhere. When they first appear, they are tender and associated with slight redness and swelling, but in two or three days the pain, together with the blush and swelling disappears, leaving a small, erythematous point behind, which is not necessarily raised above the general level of the skin about it.

I have used the term "Osler's spots" because it was Sir William Osler who first described the spots in question and called attention to their full diagnostic importance and distinguished them from the ordinary purpuric eruptions, not rarely met with in cases of malignant endocarditis.

Indeed, there are many cases of chronic malignant endocarditis, which may be termed ambulatory, because the patients can often get about and even do work; they may occasionally lose their fever for a time or may become so accustomed to it, that they ascribe it to other causes. Such persons may have the physical signs of old rheumatic or congenital valvular disease, but the presence of the super-added, chronic malignant endocarditis is sometimes not recognized by the doctors

who examine them. Slight or moderate enlargement of the spleen (septic, or due to embolic infarcts), is an important sign when present and should not lead to confusion or diagnosis of malaria. Likewise hematuria and albuminuria should always lead to careful examination of the heart.

AUGUSTUS K. DETWILER.

Omaha, Neb.

MORE ABOUT JAMAICA

The island of Jamaica, discovered by Columbus in 1494, lies 89 miles south of Cuba and 570 miles from the Isthmus of Panama. Its length is 45 miles and its average breadth 53 miles. In 1692, this island was visited by a tremendous earthquake, which sank a large portion of the city of Port Royal to the depth of 50 feet under the sea. The buildings, still standing as they had sunk, were visible in clear weather as late as 1835. (See American Cyclopedia, vol. 9, p. 511.)

Jamaica is a most unique and picturesque country, in its physical aspects and climate as well as to its population. Since 1655 it has belonged to England. Slavery was abolished in 1833.

We may gain some idea of what the character of the present population may be, by glancing at the enumeration of the different classes in 1871. The total population then was 506,154. Of this number, 13,101 were whites, 101,346 were colored, and 391,707 were black; the latter mostly being liberated slaves and their descendants. It is an interesting fact that under such conditions education has ever been a matter of interest. It should be stated that thousands of coolies have been imported from Calcutta. The English, being rulers of the country, have made themselves conspicuous.

I have traveled and sojourned in five different countries, and in no place have I formed more enduring and pleasing associations than in Jamaica. I have made it an object to make only justifiable statements, based on my own observations, history, and folk-lore, giving each due weight. I know that, as a general thing, when a man arrives at the age of 40 years he is not inclined to correct his mistakes and is averse to admitting new facts. I have seen 84 years and claim to be an exception to that rule, and try to exercise due charity for those that are empulsive and blind to the truth from whatever cause.

This brings me to a review of criticisms, anent my statements regarding my visit to Jamaica, made by Dr. R. Heslop-Payne in this journal for August, page 727.

The Doctor claims to be a native of Jamaica and to have spent the first twenty-three years of his life there. In justice to him, I will have to make a few quotations from his unique article. He introduces his comments thus:

> "Breathes there a man with soul so dead,
> Who never to himself hath said,
> This is my own, my native land?"

In proof of patriotism being a potent blinder to facts and justice, we have but to notice the unparalleled war now in progress in Europe. The Doctor is excused for having a warm side for his native land. After complimenting CLINICAL MEDICINE for publishing numerous facts from month to month, the Doctor goes on to say: "Now I know absolutely of one Munchausen story published in its columns. This bit of romancing is that portion of Dr. C. E. Witham's article on "My 6000-Mile Ocean Trip" (July, p. 615), referring to the island of Jamaica."

The doctor says I could not have written thus had I really visited that beautiful island. He says, "I must contradict his statements *seriatim*." He says, "The sunken city of Port Royal is not to be seen and has not been seen by any but the legend writers; and the good doctor even believes such rot as his ship being tied to a buoy which was anchored to a church-steeple."

Really, this is a most astounding assertion! I said nothing of the kind—I merely said that a buoy was anchored to the spire of a church. (See my article in July CLINIC, p. 617.) Now, I am willing to give the Doctor credit for misreading and not recollecting the truth. But the fact discredits his after-statements. The story is "rot," as the reader can see by reading the two articles.

As to the black woman in the street crying "Ginger-beer, ice-cold ginger-beer, 10 cents a drink, two drinks for a quarter"—her wholesale rate—and her refusing an American quarter and accepting a badly worn Spanish quarter, all I have to say is, it did occur. I was there.

I quoted from the published report of a missionary the statement that it was a rare thing for a native there to be able to tell who his father was. I infer that a missionary who had labored with the lower classes there would be the best judge and would state only facts. It is not expected of tropical countries to find the same degree of morality as in

colder countries. But the good Doctor tells us that "our white population there is far more moral than the average white population of America." In justification of this statement, he goes on to say: "Reminds me of the story the people here tell of the time when the old hotel in this town (Tripp, S. D.) burned down they found 48 dead babies in the privy vault and under the floor. . . . . I have been practicing in South Dakota for years and know its state of morals fairly well."

Now, I fully agree with Doctor Heslop-Payne that "doctors, more than any other class, should be careful in print not to give unreliable data." Now, doctor, was not the story of the 48 babies mostly "rot"? I can not see how, being a native of Jamaica and having lived there twenty-three years, can alter the history of the country.

I write this to show that, in the opinion of my critic, "our white population there is far more moral than the average white population of America." And, further, to show that in the opinion of Doctor Heslop-Payne, the American Cyclopedia makes a false statement on page 512, volume 9, where it says that the buildings of the Sunken City of Port Royal have been seen in clear weather—still standing as they had sunk.

C. E. WITHAM.

Lawrence, Kan.

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[And now the discussion is declared closed! Let us "return to our muttons"—medicine.—ED.]

"THE SADDEST AND MOST INTERESTING BRANCH OF MEDICINE" A COMMENT

I have read with much interest "Tragedies in a Sexologist's Practice," in the August number, page 686. This article is in that crisp, luminous style so characteristic of Dr. W. J. Robinson's writings. I quote the opening paragraph as a basis for dissenting comment.

"The practice of one specializing in venereal and sexual disorders is an interesting one. One hears peculiar stories, one acquires a unique insight into human nature, into the intricacies and aberrations of that powerful mainspring of human life—the sex instinct. Unexplored and uncharted depths of human psychology are opened up to you. It is the most interesting branch of medicine, but it is also the saddest one."

This paragraph illustrates one of the "unexplored and uncharted depths of human psychology;" namely, the tendency to regard as exceptional that which is general.

Read this epigrammatic introductory paragraph carefully, and you will see that any experienced specialist in any department of medicine might honestly use it as an introduction to the history of an exceptional day in his practice, thinking he had been dealing with the "most interesting and saddest" part of medicine.

The second paragraph of the paper describes a feeling altogether common to experienced and conscientious physicians in every clinical department of medicine, especially general practicians. It would, indeed, be hard to find in any American city a well-established general practician of ten or more years' experience who did not duplicate many times in the course of a year the cases enumerated. The somewhat exceptional thing in the Doctor's case is that he had so many in one day, and that, moreover, nine or ten months of it yielded a protracted Alpine holiday as a reward.

As for the sadness of tragedy, I submit the personal experience in a single day in the month of July. *Ten cases of hereditary syphilis following one after the other in hideous procession* The second commandment had suddenly become incarnate and taken my office for a dwelling-place. Distorted noses, blind eyes, suppurating ears, swollen necks, ulcerated throats, Hutchinson's teeth in fetid disarray! The decrepitude of senility and the ugliness of disease slowly extinguishing lives that have never known either the vigor of youth nor the beauty of health! And not a one of these sorry creatures had as yet reached their teens.

This grewsome train was followed by a woman in black, a widow of a week. Her husband had infected her with syphilis years before and had abandoned her. He had returned home repentant and tuberculous. This fiend repaid his wife's forgiveness and care-taking with inflicting upon her gonorrhea, which, as "whites," attracted no particular attention until after his death, when I was consulted by the family physician about a rapidly advancing inflammation of the widow's eyes. And that this pitiable woman was innocently ignorant of the cause of her woes and honestly mourned her widowhood is tragedy enough to make the hardest heart sick.

This exceptionally dull financial day closed with a case of exudative iritis in a young man who had become blind under the use of a certain advertised eyewash.

But enough of horrid details!

That day I left my office under the spell of that shadow which "man's inhumanity to man" so often casts athwart the doctor's pathway.

The tragedy of human life is deepened by the thought that the other fellow has no troubles.

C. V. Roman.

Nashville, Tenn.

CALCIUM SULPHIDE IN CONTAGIOUS DISEASES

I was very much pleased to read, in the July number of Clinical Medicine, an article upon the value of calcium sulphide as a prophylactic in smallpox and other infectious diseases. The signature, "H. C. Buck," carries me back to the days when Harry and I played together as boys in Old Kentuck'. However, the object of these lines is, to verify the accuracy of Doctor Buck's statements with regard to the uses of calcium sulphide as set forth.

A few years ago, we had in our city an epidemic of smallpox, and on that occasion I followed the advice of The Clinic, in every case giving calcium sulphide to saturation; and in every instance those patients already suffering from the disease had it in only a mild form, while those who had not yet come down with it generally remained immune. In some instances, persons who had slept in the same bed with those who had come down with smallpox escaped entirely, apparently as a result of saturation with calcium sulphide. Other persons not so treated did not escape.

This year, as a member of our local board of health, I have been administering calcium sulphide in an epidemic of scarlet-fever, and in every instance where it has been given as I have directed the disease has either been prevented or rendered so mild that the diagnosis has been a question.

I am so sure of the efficiency of calcium sulphide in diseases of this character that I should feel lost without it. I have felt better equipped and more confident of success in practice since I began prescribing it.

John W. Morris.

Malden, Mo.

ECHINACEA IN ANTHRAX

I want to tell the members of the "family" about the cures we effected with echinacea in two cases of what we were sure was real anthrax. The first victim we were called upon to treat died before anything could be done—in fact, he died shortly after I left the house. Two others, who were infected from the same source (diseased cattle) and were taken exactly the same way, very soon yielded to echinacea, in 5-drop doses given every hour. One was a wool-sorter, who had a sore on his head, very characteristic, with a very septic condition of the whole side of the head. The two improved immediately, and recovered.

Rosa W. Palmborg.

Lieu-oo, China. (P. O., Shanghai.)

THE MOLOKAI LEPER SETTLEMENT

Armed with a permit from the Board of Health of the Territory of Hawaii, without which access is not permitted, I was landed, after severe buffeting by many waves in a crazy vessel, at the leper settlement on the Island of Molokai. My stay, because of the exigencies of commerce, had to be either too short or too long. I chose the former, which made my visit rather hurried.

The villages Kaulapapa and Kalawac, which comprise the settlement, are built on a peninsula thrown out into the sea from volcanic action and comprising about ten square miles. This is covered in a large part by volcanic rocks, though part of it is well suited for gardening and agriculture. The base of this peninsula is an abrupt cliff or range of mountains from two to four thousand feet high. It reminds one of the field of Marathon. "The mountains look down on Marathon, and Marathon on the sea." It is indeed a beautiful prison, but when the alternative was given me of a stop there of a part of a day or of a week I chose the former.

We arrived at Kaulapapa at daylight, were landed at 6 o'clock, and I was conducted to the residence of Dr. W. J. Goodhue, physician in charge.

To examplify the influence of music in medicine, the band-stand, I observed, was placed in front of the Doctor's house. This house is a neat cottage, and it is surrounded by flowers and shrubbery and inclosed by a high paling fence with a double gate, one within the other, at a distance of about four feet, In front of the porch is a wide board over which one was obliged to climb. The Doctor was found in negligée, attending to his flowers. The broad board indicated the presence of little ones, who were soon in evidence. Asking about the double gate, I was told that, as the lepers sometimes came

and leaned on the outside gate, the inner gate was to keep the children from touching what the lepers had touched. Surely, a double devotion to bring up children in a leper settlement.

The Doctor had his automobile brought out and took me over to see Dr. Geo. W. McCoy, director of the United States Leprosy Investigation Station, and I was conducted through the establishment. The Government has given him a very valuable plant at the cost of about one hundred thousand dollars. It consists of laboratory and animal-house, a residence for his family and attendants, and a small hospital to keep patients in for treatment, experimentation, and observation.

The majority of the patients in this department have been treated with vaccines, that is, the killed or attenuated cultures of the leprosy bacillus, the remainder from the serum from the horse immunized against bacillus lepræ. The majority of the patients have expressed themselves as being improved under the treatment. In some there seemed to be an amelioration of the symptoms, but it proved only due to change of environment, hygiene, diet, and the mental effect. Acid-fast organisms have been found in two head-lice taken from the head of a victim with nodular leprosy. The Doctor expressed regret that his work had not contributed any material advance to the therapy of leprosy or our knowledge of the transmission of the disease. They were unable to state positively that it was transmissible in man or beast by inoculation.

The resident physician finds chaulmoogra-oil the most popular remedy; wine or elixir of iron, quinine and strychnine, according to preference also are useful. That both are decidedly ameliorative is the most that can be claimed for the antitoxin emulsion and serum that have been used; but both have drawbacks. About 75 per cent of the inmates of the leper-settlement received special treatment for leprosy. Doctor Goodhue reports one very interesting case cured by surgery.

The church and grave of Father Damien, also of other priests who gave up their lives to the lepers, were shown me in the little churchyard; also the Protestant church, the church of the Mormons, and the Y. M. C. A. building. An athletic club and various forms of amusement and labor serve to while away the time. There is a visitors' house where relatives and friends may come and visit for a time, but they are not allowed to circulate among the patients.

The lepers are comfortable and happy, most of them more so than in their home surroundings; indeed, many who are so far relieved as to be permitted to leave the settlement prefer to stay. Children are born in the settlement in a healthy condition and after a time are sent to relatives or a home for lepers' children. The doctors and attendants certainly deserve credit for their devotion to such a hopeless work. The cases which I saw at Molokai were much more interesting than those seen in Palestine and India.

E. S. McKee.

Cincinnati, O.

ATROPINE IN HEMORRHAGE

A friend of ours, a physician, recently was operated upon, in one of the Chicago hospitals, for epithelioma of the tongue, a portion of this organ being removed. The day following operation, the wound began to bleed. The doctor, understanding the gravity of the situation, attracted the attention of an attendant. He could not speak, of course, but he was able to write. In this way he requested urgently and repeatedly that he be given atropine. The medical attendant was not familiar with the use of this alkaloid for arresting hemorrhage and demurred; however, eventually he acceded to the patient's demand. The atropine was administered, and the hemorrhage ceased at once.

This little experience—a very important experience to the doctor in question, inasmuch as he is sure that it saved his life—illustrates again what an extremely valuable remedy we possess in atropine. With reference to hemorrhage from almost any cause whatever, it exerts a powerful action possessed perhaps by no other remedy except emetine, whose action is not the same.

TWO INTERESTING CASES

One evening in August, 1913, I was called to attend a patient, about eight miles distant, amidst storm and rain. When I was half of the way, the rain came in torrents, and our horses became terrified by the peals of thunder, and, in the turmoil, I was separated from my groom-man, who carries my visiting-case and medicine. The latter, as I found afterward, found shelter in the nearby village. However, I myself reached the place, although without my medicine case.

The patient, a woman of 45, had been unconscious for the last six days; could not

swallow; had convulsive fits (not of a severe type), recovering every half hour and remaining free for about five minutes. There was no protrusion of the tongue, no froth. Her bowels had not moved since she became unconscious; her tongue was foul. She had had similar fits some twenty-five years ago, but then she did not remain unconscious for so many days.

I diagnosed it to be a case of hysteria—and no medicine-case with me! A medical store could be reached two miles off, crossing a river, but none volunteered to take the trouble in this dark and stormy night. Then I remembered that I had in my pocket the hypodermic-case in which was atropine, and I injected 1-100 of a grain of it at once. This brought a little sense into the woman, and she drew down her veil. After that, a second dose, of half the strength, stopped the fits. One-half hour after that, a third dose, by mouth, completely brought her to her senses and she began to talk, and also took some food. Next morning she was given a dose of calomel and jalap. She recovered.

N. CHATTERJEE.

Dt. Burdwan, India.

THE PRACTICAL APPLICATION OF LOCAL ANESTHESIA

In discussing the application of local anesthesia it is not the desire of the writer to announce a new discovery, but to present the findings of actual experience in its practical application. The common impression is that it is useful only in minor operations, and that it has no part in general major surgery. This impression is unjust and has a tendency to relegate the method to the background. Local anesthesia has a field of usefulness both in minor and major surgery; but it must be mastered before it can be appreciated.

There are two absolute essentials that must be mastered, namely: (1) perfect knowledge of the anatomy of the field of operation; (2) mastery of the technic of obtunding the sensibility, and of the essentials of the operative technic.

The selection of subjects is very important, as it is only natural that a neurotic, high-strung patient is not a desirable one to undergo an operation with his full senses. We have a most valuable aid in this work in H-M-C given in sufficient dosage "to effect," and it is always better to administer a dose at least an hour before the operation, and repeating it if necessary.

The drugs used as local anesthetics are well known and have been employed extensively at different times. Cocaine has been the "old standby" for many years; still, it has some disadvantages that can be avoided by having recourse to one of the newer drugs now at our command. Cocaine is toxic; it can not be boiled, hence, it is not perfectly sterile; it decomposes both in solution and in the dry state, if kept too long. The writer has administered cocaine many times without getting the slightest ill effect in any form; nevertheless he has discarded it entirely for a much more reliable and safer drug for this purpose.

Quinine and urea hydrochloride is of the newer drugs of late extolled as having great virtue as a local anesthetic; however, it is slow in producing this effect, while it causes an induration at the site of the infiltration that is slow to disappear; moreover, if used too strong, it will produce necrosis both in superficial and deep structures. Hence, I give it as a warning that it should never be injected into dense structures or the periosteum. When it is used, it should be in solution, of a strength ranging from 0.25 to 1 percent. Also, great care must be exercised that the tissues be not infiltrated too much. After complete infiltration the operator must wait at least five or ten minutes before operating. The anesthesia produced is quite enduring, lasting from an hour to as long as several days.

Alypin is very rapid in its action, and is perfectly safe in small amounts. Toxic effects have been reported; but, if used in less than 2 percent strength, it will not give rise to any inconvenience.

Novocain is a late addition to this group and so far has been found almost ideal, and it fulfils every want. The combination of novocain and suprarenin (synthetic) can be obtained in very convenient tablet form. The tablet is dissolved in normal salt solution and boiled, which sterilizes the solution perfectly, thus preventing bacterial contamination. The "tablet A" contains 0.125 Gram of novocain and 0.000125 Gram of suprarenin (synthetic). One, two or four tablets dissolved in 25 Cc. of salt solution will give a 1-2-, 1- or 2-percent solution. A 1-2-percent solution is strong enough for the average operation. In a general way, it is unnecessary to consider the dosage of novocain, unless an unusual and absurdly large quantity is used. We know that even normal salt solution is toxic when used to excess.

A convenient manner of boiling the anesthetizing solution is, to dissolve the tablets in

the required amount of salt solution in a test tube, then ignite a formin 5-grain tablet, which makes a very convenient "alcohol-lamp." It does not take up much room and never spills.

Local anesthesia is accomplished by one of three methods: (1) infiltration; (2) intravenous injection; (3) nerve blocking.

1. Infiltration is the method most commonly in use and in the average condition is entirely satisfactory. The procedure is quite simple. To the part, whenever possible, a tourniquet should be applied; but this is not an absolute essential, as the suprarenin will take care of the capillary bleeding. The surface is cleansed with a benzin solution of iodine, 1 : 1000, then stained with a 3.5-percent tincture of iodine. Having all in readiness and absolutely aseptic for the infiltration, fill an ordinary hypodermic syringe with the solution. Now pinch up a fold of the skin and insert the needle quite superficially and almost paralle with the skin. A white wheal rises. Always inject the solution very slowly. For the next syringeful the needle is inserted right into the wheal, but not so near the surface of the skin. As the needle is being advanced the solution is slowly injected.

It is always necessary to keep each new insertion of the needle within the already anesthetized zone, thereby obviating pain. When the length of the proposed incision is reached, then the deeper structures must be injected, until a sufficient area is prepared. The superficial infiltration blocks the tactile and sensory nerve-filaments, and later the deeper nerves are blocked completely, thus eliminating the painful sensations caused by working in live tissues. If in the course of the operation an area is reached that does not show a sufficient anesthesia, the operator must stop work immediately and infiltrate this area. In all cases, it is essential to avoid pain; for pain tends to make the patient uneasy and to lose confidence in the method, even though the operation is nearly finished and the worst possible part of the traumatism is over. Patients will recall the painful part of the operation more than anything else. If the operator can keep the patient ignorant of the different stages of the work, he will encounter little difficulty.

The important points of the operative technic are these: An absolute knowledge and certainty of the anatomy of the area; the operation must be done as gently as possible—clean dissection is attended with better and more satisfactory results; using sharp instruments, cutting either with knife or small "nips" with the Mayo dissecting-scissors; pulling and dragging upon the tissues to be strictly avoided.

Should the patient show signs of syncope, it is better to lower his head; by so doing, the blood gravitates back to the temporarily anemic brain.

The range of usefulness of the local method of inducing painlessness is quite extensive; but, of course, it is best suited to superficial operations.

The following types of operations have been done by the writer under novocain infiltration: Herniotomies (one patient, a man of 84 years—strangulated hernia, with stercoracious vomiting—made complete recovery); appendectomies; excision of prepatellar bursa; tumors; hydroceles; lymphadenitis (cervical); vericocele; amputations (digits); circumcisions; excision of ganglia; bunions; empyema; ingrown toe-nails; tenotomies and tenorrhaphies; hemorrhoids; ectomies; excision of sebaceous cysts and dermoids (of skin). Many others might be added.

In abdominal work in which it is necessary to handle the peritoneum we encounter some difficulty. The parietal peritoneum is sensitive to manipulation and traction; but this can be overcome by direct application of the solution. The intestines can be handled quite freely without causing pain, but if traction is exerted upon the mesentery it produces marked discomfort of a cramplike nature.

Herniotomies are quite easily done and afford great satisfaction. In a small hernia, the sac is easily found by its color, and if it is pinched with the forceps the patient complains only for a moment. To obtain the most satisfactory results, all these operations must be done slowly. These patients suffer far less postoperative pain—usually a heavy, throbbing pain. Vomiting is absent, and they are able to drink water and eat light food.

2. Intravenous anesthesia is more limited in its application, as it can be used to the best advantage only in the extremities. The operator places a bandage above the knee, allows the veins to fill, then tightens up. A vein is isolated, the blood is withdrawn, and then the vein is filled with the anesthetizing solution. Bier has reported very extensively upon this method. The technic must be perfect, as the method is attended with some danger.

3. Conductive anesthesia, or nerve blocking, is beginning to grow in favor, especially

in the dental profession, for it is there that it has a wide scope of usefulness. Novocain (in 2-percent solution) is injected into the nerve at some point above the field of operation. In operations on the lower extremity, the anterior crural and great sciatic nerves are injected, this obtunding the sensibility in the entire leg.

The brachial plexus has been infiltrated for operations in the forearm.

The lower jaw is attacked by infiltrating the inferior dental nerve just where it enters the inferior dental foramen on the inner side of the lower jaw. This will anesthetize half the lower jaw, and teeth may be extracted, root-canals cleaned out and filled, as well as other operations performed as they arise.

Conclusions:

1. The local use of novocain is to be preferred, because of its safety (being non-toxic) and that it can be boiled.
2. Local anesthesia is a fertile field needing more cultivation.
3. It has a great field in office practice.

CHARLES W. DELANEY.

Altoona, Pa.

AN ELECTRICAL CHARGE FROM THE DYING. WHO WILL COMMENT?

I wish to ask you a question. Have you ever known of a dying person in whom an electrical current was engendered in the arm or any part of the body and which would give an electric shock to a well person touching him?

In the month of April I attended a woman nearly 80 years old, who was of a remarkably strong constitution, and the mother of thirteen children, eight of whom are living. I could not discover evidence of any disease: she had no pain, no fever, no discharges of abnormal character; bowels and kidneys were acting regularly; heart was strong, regular, beating 75 per minute; respiration was regular; mind was clear and memory good. The only thing she complained of was a smarting of the vagina after urinating, which I found to result from a slight scalding from the urine; and this yielded at once to washing and applications of zinc ointment.

However, in the night of April 25 the woman became unconscious and died at 4 o'clock next morning. Now comes the odd thing. An hour or two before she died, two of her sons were sitting beside her, one on each side of the bed, feeling her pulse, when the older one felt in his hand and arm a strange sensation, and he had to let go and apply cold water, to get relief. Soon after that the younger man placed his finger on his mother's pulse, whereupon he got a distinct shock, he declares, just as he has had by taking a hold of a small battery. Then a sister also felt it, as did two neighbor women present. All experienced the same feeling, and all describe it as exactly like that produced by a small battery. They would have sent for me to examine the patient, but she died soon after the shocks were felt.

I have never met with such a phenomenon before. Have any of you? I write this, hoping you may have some information on a similar case. To me it is a most unique occurrence. The people are intelligent and were not unduly excited. If only one had felt the shock, I should not have given it any attention, but supposed it was a nervous condition in the subject, brought on by the want of rest or by grief. But some of them were cool-headed neighbors, who were not excited. And all of them—five in all—give the same testimony. Now, this is a nut too strong for me to crack. Maybe some of you editors can extract the kernel.

THOMAS W. MUSGROVE.

Sultan, Wash.

[Suggestion? Looks like it—but has anyone a better hypothesis?—ED.]

THAT OUNCE OF PREVENTION: SOCIALIZING THE MEDICAL PROFESSION

It does a doctor a world of good to know that his diagnosis and treatment have been confirmed by competent counsel; it gives him increased confidence in himself and his methods; it nerves him for the further prosecution of his work. The greatest good in this world that can come to us is the knowledge that we are right and that we are helping along the evolution of a higher civilization.

These thoughts are suggested by the many favorable comments received on my articles that appeared in THE AMERICAN JOURNAL OF CLINICAL MEDICINE, entitled "Economic Environment (April, 1913), "Health Hints" (October, 1912), and "The Genesis of Crime (July, 1912), besides the other ones. Moreover, my studies along the lines alluded to in those articles since they were written fully confirm the position then taken.

Economic evolution certainly is forcing our profession to adjust itself to our rapidly changing industrial environment. That we must do this or fall out, disgraced and dis-

credited, or linger on as laggards, is becoming more certain every day.

What an unpardonable folly to treat symptoms alone, without ever seeking out the causes.

Take this example. Most of my clientele live in the great packery district of Fort Worth, Texas. Here the two large companies employ from 2500 to 4000 men and women. The wages they pay run from $4 to $20 a week. A fair average wage for those who do the real work would be perhaps about $6 or $7. These companies clear approximately $1600 a year on each worker. Now, how can any man support an average family of five on one dollar a day at the present cost of living?

It is useless to talk about saving anything for old age, securing a home (hardly one in thirty owns one), educating the children, taking a vacation or enjoying any of the advantages of our civilization. Really, these wage-slaves are in a worse condition than were the chattel slaves before the Civil War. Then masters were hunting slaves; now slaves are hunting masters. Then it paid the master to care well for his chattels. Now they do not get as much attention as do government mules. It reminds one of the lines put into the mouth of such a plantation-slave:

> My massa had a working man,
> He also had a mule,
> To save my life I couldn't tell
> Which was the biggest fool.
>
> He fed the man on liver,
> He fed the mule on hay,
> He cussed the man and kicked the mule,
> And worked them every day.

More than 900 of our packing-house people have recently been "let out"; nevertheless, through the speeding-up process, installing of improved machinery, forcing the help to violate the law by working on Sunday, fake insurance, cutting wages, and other methods so well known to our capitalistic feudalism, as much as ever is being produced for the masters. Still, hundreds always are at the gates, seeking jobs.

And the doctor—where does he come in? Of course, he comes out at the little end of the horn. If I succeed in collecting one dollar out of five booked, I am doing well; at that, using the alkaloidal remedies mostly, I furnish them my own medicines free. These people will not call until the last hope of relief from home treatment or patent medicines has vanished. Consequently, the doctor, as well as the patient himself, stands at a great disadvantage.

Meantime the millionaire owners are having a good time at northern health-resorts or in Europe, living in luxury, "clad in purple and fine linen, faring sumptuously every day," spending lavishly the money they did not earn and do not need. In this country, in 1912, certain packeries reaped a net profit of $72,000,000 for less than 200 stockholders [This statement we question.—Ed.] The workers everywhere earn and need the money that they do not get. Their children must sicken and die for want of the bare necessities of life. In two families where I was called recently, the wives being sick, the husbands lost their jobs because they remained at home to wait on their helpmates. Wherever all these jobless go to look for work they find similar conditions. Harvest fields are overcrowded, and, besides, it costs more than the men can save up to get to the work.

Now, my studies lead me to believe that this is no overdrawn concrete illustration of the abnormal—yes, beastly—economic conditions all over our country. There are, of course, endless variations. But the astounding facts stated in my articles above referred to are abundantly proven; and the conditions set forth are now so accentuated that in several states like Colorado, Michigan, West Virginia, California, and so on, violence and bloodshed are resorted to. A starving man knows no law.

About one hundred families—mark: 100 families—now own half of all the enormous wealth in this country, and this handful of individuals largely controls what we call the West. These same persons control the old parties, as also to a very large extent the churches, schools, newspapers, magazines, and other means of intelligence. Read "The Story of the Month" by Lincoln Steffens in May *McClure's*. About 19,000,000 persons—or three-fourths of our wage-earning population—have an annual income of only $480, when it takes $1000 a year to maintain a family in physical efficiency. To live comfortably, own a home and give the family a good education, costs from $3000 to $5000 a year. Less than one in 200 families in our country get this.

Just here is my answer to the editor's objections to my remedy, as presented in the issue for April, 1913, page 345. The editor thinks that, in advocating government ownership of all capital used for purposes of exploitation, I am not "in line with evolutionary law." "Progress comes as a result of struggle," he says.

This is very true, when "struggle" refers to man's contest with the forces of nature below him and with many of the lower forms of life; but not true when man struggles with his brother man on the economic plan for a living. Here, as Ruskin well says, "cooperation is everywhere the law of life and competition the law of death." The noted sociologist Lester F. Ward also proves, by a wealth of facts, in his "Applied Sociology" that "over fifty times more talented people, such as have led the world's civilization, have sprung from families that did not have to struggle" as strenuously as do our families that are now engaged in industrial warfare.

Now, my remedy would remove the struggle from the economic to the higher plans of action, would force the privileged parasites, who know "neither toil nor spin," to work at least enough to produce a healthy body and mind, and to enable those millions upon millions, who are now nothing but beasts of burden, to cultivate and develop their minds. Our capitalistic monopolies necessitate class conflicts, forcing all classes far beyond the health-zone. Hence, disease and all abnormal conditions are increasing from two to five times faster than our population.

In my "Health Hints," I was the first, so far as known, to advocate a four-hour workday—that is, for physical labor—as most conducive to our symmetrical healthy development at this stage of our evolution. And now comes Dr. C. B. Steinmetz, our country's leading electrical scientist, and says that "the day's work should be reduced to four hours." The Doctor is the president of The World General Electric Company of New York. He declares that this could easily be accomplished by "a rational organization of society" such as socialism proposes. He is a red-card outspoken Socialist, of course.

Our economic philosophers have figured it out that with such an organization conserving the ocean of energy that now goes to waste every worker would get $2000 a year for a six-hour day, and more later on, as better machinery was installed. Think of the time this would give for rest, recreation, and improvement in a thousand ways. I should like to have the erudite editors of our AMERICAN JOURNAL OF CLINICAL MEDICINE tell us how this would produce "a race of weaklings."

Dr. Alfred Russell Wallace, codiscoverer, with Darwin, of the law of selection, a most eminent scientist surveying the present condition of society, in his late work titled "Social Environment and Moral Progress," writes: "Our whole system of society is rotten from top to bottom and the social environment is the worst the world has ever seen." (See p. 169.) Alarmingly true; and, hence, Dr. E. Divine says: "These hardships are economical, social, transitional, measureable, manageable. Misery, as we say of tuberculosis, is communicable, curable, and preventable. It lies not in the unalterable nature of things, but in our particular human institutions, our social arrangements, our tenements and streets and subways, our laws and courts and jails, our religion, our education, our philanthropy, our politics, our industry, and our business."

Such is a meagre epitome of the causes that have been involuted in our social structure, the results of which we now behold in the evolution of the barbarisms that portend such conditions as we shall see in Mexico soon unless averted by more enlightened measures. Certainly, the exploitation of the laboring class out of five-tenths to nine-tenths of all it produces is the blackest crime of all the ages. It must go peaceably, I say; but forcibly if the exploiters so elect. Wage-slavery can no more continue than could chattel slavery fifty years ago.

I can see no other legitimate remedy but government ownership and management of all the great natural monopolies. Then only will society's purchasing power equal its productive power. Everyone will control his job and get just what he produces, or its equivalent; and with this he will be free to purchase private property to his liking.

It is easy to see how the laborer could earn from five to ten times what the average working-man gets now. A good home free from debt, with the best educational advantages, would be within the reach of all. This would insure health, happiness, and a progressive civilization, without the barbarous bloody cataclysms of war, such as we have seen in the past [and is in progress as this goes to the printer.—ED.].

The physician, as Professor Voght shows in *The Popular Science Monthly*, will be employed by the state, the same as our teachers, policemen, and so on. It will be the doctor's business in his daily rounds to teach the people the avoidable causes of disease. How much more reasonable will not his ounce of prevention be than is the pound of cure he now dispenses. How much better to nip the evil in the bud.

Under the present system, he is prosperous in inverse ratio to the health of the community. Since he receives his reward from

the curative side of his practice, he cannot be professionally interested in the prevention of disease. This is just the opposite of what it should be. Under socialism, the doctor will be most interested in the prevention of disease, and the greater his success in this, the less would be his labor of curing.

Our free dispensaries are unfair, in that they place a stigma on the poor, and thus destroy their manhood. The great number now too proud to patronize a dispensary and too poor to call a physician would receive timely treatment under the plan proposed. What an indictment of our socalled civilization (which in reality is galvanized barbarism) it is that three-fourths of our 20,000,000 school-children are diseased and their parents are too poor to provide timely treatment. My plan would help them all alike, and at once. Private practice, as the private schools of today, could be continued at the option of any who wished; but the elimination of the causes of disease would be the chief duty of the physician.

Is it not as necessary to develop a healthy body as well as a healthy mind? Every farmer knows that good conditions are a prerequisite for good crops and healthy stock. The same is true of the human species, as Burbank has abundantly shown. Even the American Medical Association, at its last session, began to wake up to this fact. Many organizations of various kinds now employ a company-doctor.

The socialization of our profession, already begun, should be so extended as to include all the people. Even our own self-interest demands this. But, far beyond this, all our nobler instincts cry out for it. The trend of our humanitarianism is all in that direction. May God in us energize us to help speed the day.

S. J. Brownson.

Fort Worth, Tex.

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[The poverty, inequality, and injustice, of which Doctor Brownson draws such a vivid picture, makes our hearts bleed; but, it does not follow that the remedy that he suggests —socialism—will prove the cure-all for all our troubles, or that society will go on, in the even tenor of its way, grappling with the world's industrial problems and conquering the forces of nature, when the machinery of production is turned over to the proletariat to run in its own sweet way on a four-hour-a-day plan.

The impression seems to prevail very widely among the poor that our captains of industry "toil not, neither do they spin." How foolish—how untrue! It is because they work harder than other men, and put into their efforts a degree of energy, determination, and intelligence that the book-reformer has no conception of whatever that they *are* captains of industry. It is the intelligent creative labor of these very men which has organized and built up the great industries of the nation, and which gives work at living wages to millions of men, who have neither the intelligence or initiative to create anything for themselves or others. On the other hand, the men who are very poor, in nine cases out of ten owe their debased position in society either to their lack of intelligence or to their lack of effort.

It may be that when the men of great creative power are reduced to the level of the mass, they will find new channels for their energies—but we have no assurance that this will be so. Socialism has never been tried; it is still a theory—though a beautiful theory.

We repeat, that it is our conviction that its inevitable tendency is to pull down the men of power and to raise up the feeble and the commonplace. The strength of a nation depends upon the intellectual strength of its men of action, who must somehow possess the right to *compel* the weaklings to do the necessary work. The airy promises of incomes of $2000 a year, for four hours a day of labor, are but bait to catch the foolish, and will hardly mislead many thoughtful men.

After all, it seems to the writer that what we need is not a tearing up of society by the roots, but rather a readjustment to new conditions, with such changes that there may be the largest possible equality of opportunity, a minimum of special privilege, and abundant stimulus to intelligence and industry. This readjustment is actually going on at the present time, and as rapidly as conditions warrant. However, the world is to go ahead, *and brain must rule, not mere brawn.* The proletariat state would be a rotten and dying one, in our humble opinion.—Ed.]

TAKING COLD

On page 118 of February Clinical Medicine, you say: "We shall have to revise our old views about catching cold. (1) Here we have been stopping in a summer cottage, a little snow outside, with temperature falling at night below freezing; cottage very open, no heater except an oil-stove; (2) yet, we have had no colds. (3) In the city, going on the cars to the office, sitting in a warm house, we have

never a day without sneezing, and sometimes it develops into a cold. (4) Here we work hard, cutting, chopping, sawing, brushing, but have no colds. Evidently it is not cold that causes colds. Then what is it? Germs."

Now let's investigate this theory of the doctor's and see where we are at!

About thirteen years ago, when I was attending medical college, the faculty thought it wise to have a then somewhat renowned professor from some eastern city hold a public lecture, before us students, and to which lawyers, ministers and whoever would be interested were to be invited, on the prevention of disease.

Among other things new and astonishing, the professor expounded the extraordinary discovery that the phrase to "catch, or to take, cold" was a misnomer. However, he volunteered no substitute that would more clearly express what we meant. We dropped the new idea, that he so eloquently portrayed before us, for want of a more appropriate or suitable name for that condition; and until now—it seems we are still waiting for a better name for that pathologic condition.

Now let us look into the cause of taking, or catching, a cold, taking up point for point.

1. You, my friend of THE CLINIC, have not been, or were not, sitting around and reading, allowing your body to go almost into a slumber and inactivity, as you would in the house or in your office, or even in the street car; but, on the contrary, you went out there in the open to enjoy activity, putting on proper clothing to fit the occasion, kept yourself active and on the alert for as much comfort as you could obtain, and did not allow yourself to perspire, so that your underclothing was dry and not heavy with sweat, and did get warm and sweating. You were very careful not to sit or stand idly in a draft, but kept yourself active until your clothing became dry, and, in addition, if you did find that you must keep quiet for a while, you put on your overcoat, to keep the cool wind (air) from those wet clothes. Otherwise, you will agree with me, that you would have "caught a cold" just as you would have done under similar circumstances in any other place.

Can you not recall your mind to such experiences in your practice? I can; and not only so, but personal experiences, many of them.

2. Why you have no colds is not because of the open cottage, no fire and no germs, but because you were fortified by a normal health (resistive power), by active work, plenty of clothing, dry and warm, no draught, and by being careful not to allow yourself to sit still reading, writing, etc., through which your circulation, at least in part, would become inactive.

3. This has already been answered by the foregoing, when it is considered that the passenger in the street-car came into the car in a warm and sweating condition, sitting still, with the front door or overhead windows open, causing a draught on your feet, back, etc.

The same may be said as to when in your office, reading or writing, with hardly enough heat to keep one from chilling, or else sweltering hot, then opening door or window to cause a draught while sitting quiet.

The adult is not much different in this respect from the child. No matter how healthy the babe is, if the nurse who washes its head and allows it to be uncovered while bathing the body—hence, without protection from wind or draught—it will at once begin to sneeze—the baby has caught cold. When the babe is covered too warm and turned over without wiping the then turned-up side of the head, it may begin to sneeze, and, if there should happen to be a cool draught over it, develop earache, or "neuralgia." If the nurse is slow in changing the babe, having brought it out of its warm bed, exposing it to the cold air of the house, its feet getting cold, there may follow indigestion and colic, because the child has "caught" a cold.

4. Again, you take no cold because of your activity, you work in your shirt-sleeves, hardly get warm, but, when you do, you are very careful not to allow yourself to stand or sit in the wind without drawing on your jacket or coat, lest you "take cold." This is common sense that even the woodchopper has learned many centuries ago—and no scientific theories have been able to disprove it.

Internally, cold drinks congeal the mucus and increase the quantity of it, and all the rest of it.

It may be well enough to explain how a chill or cold congests the tissues or the fluids in the tissues and so produce an inflammation in which the various germs cause heat and swelling, but it still remains true that the primary cause was a cold or chill, and, through that, gave rise to the infection; this being developed within the tissues, and not from the surroundings, such as impure or insufficient air, and so on.

However, the inactivity of the man, the want of exercise, lack of ventilation and pure air undoubtedly reduce the resistive power to

cold and atmospheric changes, and thus one becomes more susceptible to the ravages of the elements and to infections of all sorts.

To sum up the question. To me, it is plain that these congestions are due to, and are the result of, sudden changes of temperature in an unprotected part or a chilliness of the whole body, and does not depend so much on location and environment of atmosphere as upon the resistive power of the individual, and the peculiar neglect or care as to exposure, the avoidance of overheating or chilling, and the consequent contraction of colds.

R. WILLMAN.

St. Joseph, Mo.

[I heard Captain Amundsen, in his lecture upon the discovery of the South Pole, declare that there were no "colds" among the members of his crew—but of exposure there was no lack. Other explorers in arctic regions report similar experiences. If we can get away from "the crowded haunts of civilization" infectious diseases of all kinds are rare—if we except those transmitted by the bites of insects or carried by travelers. There are several factors in "taking cold," all important. One is of natural susceptibility; another is temporary loss of resistance, due to exposure and disturbance of vascular equilibrium; while a third is—"germs"!—ED.]

A CHEAP AND UNIQUE SURGEON'S KNIFE

For the last two years I have been using as an operating knife a Durham Duplex Demonstrator razor, costing 35 cents. This

Fig. 1.

is modified for surgical purposes as follows: First I remove the handle, of which I file off one side and an end, as shown in the photograph. (See Fig. 1.) This gives me a knife which can be used on one side for shaving the hair, and on the other side for operative purposes. (See Fig. 2.)

I like this much better than the expensive surgeon's knives procurable from the instrument houses. I can always have it sharp whenever I want it. I find it better to employ blades that have been used for shaving until they have become dull for that purpose, since the new blades seem too sharp for surgical work.

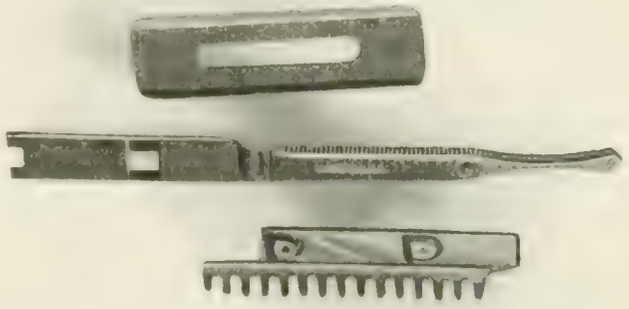

Fig. 2.

I hope that other physicians will try this unique contrivance and let me know how they like it.

CHARLES W. LARRABEE.

Helen, Ga.

BABY CONTESTS—WHAT IS EXPECTED OF THE "JUDGE"

Recently we received an inquiry from one of our subscribers as to what he would be expected to do in a prize-baby contest. He knew that there were rules governing the judging of the youngsters, but what those rules were he did not know, and so he came to us for help. Through the kindness of Dr. Effa V. Davis, of Chicago, we learned that we could secure the necessary "score cards" from Dr. Margaret V. Clark, of Waterloo, Iowa. We accordingly wrote to Dr. Clark, who sent us a copy of the blank to be filled out.

Inasmuch as there are readers of CLINICAL MEDICINE who may be called upon to act as judges in baby contests, we reproduce herewith the official score card handed us by Dr. Clark. Copies of this card can be secured by addressing Mrs. Mary T. Watts, Audobon, Iowa, who is president of The American Baby Health Contest Association, or from Dr. Clark, at the address given. It is copyrighted.

DUPLICATE OFFICIAL SCORE CARD

AMERICAN BABY HEALTH CONTEST ASSOCIATION

Contest held by
Place of Examination. Date .191
Name of Child
Age, Years.....Months.. .Days.
Sex, Boy.....Girl
Blonde.....Brunette.....Medium
Weight at Birth.....Strong at Birth?....
Order of Birth.....
1st, 2nd or 3rd Child?

Breast fed.....Regularly?.....Months .....
What kind of Artificial Food?.....
Regularly?.....Months .....
Is child now given sweets and other food between meals?.....
Has child slept habitually in the open air or with open windows in the day time?.....
and at night?.....
Father's Name.....
Age.....Years.
Address.....
Occupation.....Education.....
Nationality of Father.....
Paternal Grandparents.....
If American, nationality of child's paternal grandparents.
Does Father use Beer.....Wine.....
or other Alcoholic Drinks?.....
Mother's Age.....Years. Education.....
Occupation before marriage.....
After.....
Nationality.....
Maternal Grandparents.....
If American, nationality of child's maternal grandparents.
Parents live in City, Town, of..... inhabitants in the country.....

The Scoring is arranged for children between the ages of twelve and thirty-six months, only.

PSYCHOLOGICAL	Perfect Score	Score
1. Facial and ocular expression...	10	.....
2. Intelligence.....	6	.....
3. Tractability.....	5	.....
4. Attention.....	3	.....
5. Imitation.....	4	.....
6. Disposition.....	5	.....
HEAD		
7. Length of head.....inches Width.....inches Circumference ...inches Front of head....inches	5	.....
8. Symmetry of head, including shape and size of forehead, occiput, temporal and parietal regions.....	8	.....
9. Pupillary distance....inches Shape of eyes.....	4	.....
10. Shape, size and position of ears.	3	.....
11. Shape and size of lips.....	3	.....
12. Shape and patency of nose.....	3	.....
13. Shape and condition of jaw, hard palate, tonsils	3	.....
14. Number.....shape, size and condition of teeth	4	.....
GENERAL EXAMINATION		
15. Height.....inches	5	...
16. Weight.....pounds ...	5	
17. Circumference of chest.....in.	5	...
18. Circumference of abdomen..in.	2	...
19 Symmetry.....	4	...
20. Quality of skin and fat.....	4	....
21. Quality of muscles—hand grasp, rising, sitting, poise, walking, running.....	4	...
22. Bones of skull, spine, chest, limbs and feet.....	5	...
	100	.....

Cephalic Index .....

Table of Average Heights, Weights and Measurements. Use also to discover Faults of Symmetry.

(See No. 19.)

Ages in Months	Hgt.	Wgt.	Chest Meas.	Abdo. Meas.	Head Cir.
12 to 13 mo. inc.....	30.80	23.30	18.10	17.80	18.20
14 to 15 mo. inc.....	31.66	23.35	18.34	18.00	18 45
16 to 17 mo. inc.....	32.24	24.40	18.58	18.20	18.70
18 to 19 mo. inc.....	32 82	25.45	18.82	18.40	18.95
20 to 21 mo. inc.....	33.40	26.50	19.06	18.60	19.20
22 to 23 mo. inc.....	33.98	27.55	19.30	18.80	19.30
24 to 25 mo. inc.....	34.56	28.60	19.54	19.00	19.38
26 to 27 mo. inc.....	35.14	29.65	19.78	19.20	19.46
28 to 29 mo. inc.....	35.72	30.70	20.02	19.40	19.50
30 to 31 mo. inc.....	36.30	31 75	20.26	19.60	19.60
32 to 33 mo. inc.....	36.88	32.80	20.50	19.80	19.70
34 to 35 mo. inc.....	37.38	33.85	20.74	20.00	19.78

Teeth—Central incisors appear about the 7th mo.; lateral incisors from 8th to 10th; anterior molars 12th to 18th; eye and stomach 14th to 20th; posterior molars, 18th to 36th.

Multiply width of head by one hundred and divide by length to get cephalic index. When index is seventy-five or less the child is dolicocephalic or long-headed; seventy-five to eighty, mesocephalic; eighty to eighty-five, brachycephalic.

The anterior fontanelle should not be bulging, rather slightly depressed. It should be completely closed between the fifteenth and twentieth month.

The bony skeleton should be especially examined for rickets.

The child should first attempt to sit at about the 16th week, be fairly successful about the 40th week, and firmly seated at the 10th or 11th month.

He should attempt to stand about the 38th week, and be successful at the 11th or 12th month. He should walk unsupported at the 14th or 15th month—certainly not later than the 18th month. Precocity in walking is not desirable.

The skin should be pink, flesh firm and lips red, breath sweet, tongue clean. He should breathe through the nose only and should not be fretful. He should not be restlessly active, nor disinclined to play.

"INCLUDING FINNIGAN"

Of course everybody knows Gillilan's poem reciting the succinct but expressive report of Section Boss Finnigin to Superintendent Flannigan—"Off agin, on agin, gone agin—Finnigin." We are happy to see that "Finnigin" has at last been immortalized by the publication of this poem with others in book form. Gillilan writes some mighty good stuff. He is not a Tennyson, nor a Byron, nor an Alfred Noyes or even a William Watson—thank God! But he does know how to touch the hearts, arouse the risibilities and strengthen the courage of good plain Americans. For instance, the following:

Courage, brothers; while a clamor from the busy world may rise
Filling all the songless spaces 'neath the overarching skies,
While we feel our little murmur may be heard by none but us,
Sing—sing on, though hearts may falter, it is besn we labor thus.
Someone—here, or there, or yonder—hears to sound amid it all

But the cadence of our carols as they bravely rise
and fall.
And the very hope it yearns for to some weary soul
you bring
While you fear nobody listens to the little songs you
sing.

Those who know and love children and try to understand them will appreciate the following:

I'm not a-scared o' horses ner street cars ner anything,
Ner automobiles ner th' cabs; an' once, away last
spring,
A grea' big hook an' ladder fing went alspty bangin'
by
An' I was purtnear in th' way, an' didn't even cry;
'Cause when I'm down town I go 'round wif papa—
un'erstand,
An' I'm not 'fraid o' nuffin' when my papa holds
my hand.

* * * *

Sometimes my papa holds on like I maybe helped
him, too,
An' makes me feel most awful good puttendin' like
I do.
An' papa says—w'y papa says—w'y somepin like
'at we
An' God 'ist keep a holdin' hands the same as him
an' me.
He says some uvver fings 'at 'I ist partly un'erstand,
But I know this—I'm not afraid when papa holds
my hand.

Even doctors can laugh over Gillilan's poem on "Modern Medicine:"

I went to a modern doctor to learn what is was
was wrong.
I'd lately been off my fodder, and life was no more
a song.
He felt of my pulse as they all do, he gazed at my
outstretched tongue;
He took off my coat and weskit and harked at each
wheezing lung.
He fed me a small glass penstalk with figures upon
the side,
And this was his final verdict when all of my marks
he'd spied:

"Do you eat fried eggs? Then quit it,
You don't? Then hurry and eat 'em,
Along with some hay that was cut in May—
There are no other foods to beat 'em.
Do you walk? Then stop instanter—
For exercise will not do
For people with whom it doesn't agree—
And this is the rule for you:
Just quit whatever you do do
And begin whatever you don't;
For what you don't do may agree with you
As whatever you do do don't."

"Yes," thus saith the modern doctor, "tradition be
double durned!
What the oldsters knew was nothing compared to
the things we've learned.
There's nothing in this or that thing that's certain
in every case
Any more than a single bonnet's becoming to every
face.
It's all in the diagnosis that tells us the patient's
fix—
The modern who knows his business is up to a host
of tricks."

"Do you eat roast pork? Then stop it,
You don't? Then get after it quickly.
For the long-eared ass gives the laugh to grass
And delights in the weed that's prickly.
Do you sleep with the windows open?
Then batten them good and tight
And swallow the same old fetid air
Through all of the snoozesome night.
Just quit whatever you do do
And do whatever you don't;
For what you don't do may agree with you
As whatever you do do don't."

I should not wonder a bit if there are two or three hundred readers of CLINICAL MEDICINE who will want copies of this book. The price is only $1.00, and it is published by Forbes & Co., Chicago. Doubtless you can secure it from your book dealer.

"INANITION FEVER" OR SKIN IRRITATION OF THE NEWBORN?

I am a reader of CLINICAL MEDICINE, and I regard it as one of my best journals: From it I obtain many valuable points. I have just finished reading in my August number what the different doctors have to say about "inanition fever," or the kind of fever of which they speak, and, as I have recently had in practice three cases, I wish to say a few words on the subject.

To begin with, to my mind, "inanition fever," as applied to this class of fevers, is a misnomer. No child, surely, would be so nearly starved within the first twenty-four or thirty-six hours; in fact, most of them can go that long without food, especially if they are given the breast, whether or not there is any nourishment in it. Not often we see them crying from hunger quite so soon.

All three of my cases were quite similar; two of them were deliveries of my own, one was delivered by a brother doctor. In each instance I was called hurriedly about twenty-four hours after the child was born. The family would report that the baby had cried almost continually since about six hours after delivery. I would find the little one almost exhausted and crying with every breath, while there was a high fever (101° to 104° F.), and skin red and hot to the touch. The people felt sure the child could not live and only had called me hoping that I could give temporary relief so that death might be more easy.

I remember that when these children were delivered they were given to an old granny woman to bathe, this being the custom with most of us doctors, while the granny women take this as part of their job; and I am free to admit that we are often too careless in

allowing them to proceed without giving strict orders as to the manner of bathing and dressing the child. They always first grease the child all over with lard or some other stale grease and then proceed to wash and scrub it with a rag and any kind of old soap.

Right here is where the trouble starts: lard, scrubbing, and soap (alkali soap) to the tender soft skin of an infant is enough to burn or eat the toughest skin. The skin becomes swollen and thick, the pores of the skin are closed from swelling and from the grease (enough to cause rise of temperature, I think)—do you wonder the little thing is crying, with its skin simply "cooked" by the alkali soap? And let me say here, too, that this is where most of the old-women's "hives" come in.

I relieved all of my patients right away in a simple manner. I ordered a bowl of warm water and added to it about an ounce of acetic acid, then gave the little sufferer a general bath, taking good care of the eyes. Taking the child from the water, I dried it thoroughly with a soft cloth, then applied freely an acid lotion known as eczemadine (made by William A. Webster, Memphis, Tenn.)—a preparation I have used and found to be good. This lotion I let dry in the air, then powdered the child over, from head to foot, with borated talcum. The child ceased crying and fell asleep in my hands, its temperature receded, the skin cleared, and there was no further trouble, or, in other words, I was never called upon again. The families reported that the child made an uneventful recovery.

Try this in your next cases, doctor, and see how it works; then report to the "family." Meantime I should like to hear what some of the brethren have to say about this.

Ocilla, Ga. GABE W. WILLIS.

OUR LONDON LETTER: THE CLINICAL CONGRESS

[*Continued from September issue, page 815*]

To revert to the Congress. On the second day in the evening section of general surgery, a paper was read by Dr. Henry Jellett, of Dublin, in which he urged systematic suture of the levator ani muscle in perineorrhaphy. The speaker combated the idea that the operation was difficult or involved extensive dissection, maintaining that there were no anatomical or practical difficulties. He described the mode of operation, and claimed for it ease and rapidity, as it rarely takes more than fifteen minutes to perform. The paper was discussed by F. J. McCann, of London.

Mr. Robert Jones, of Liverpool, then read a paper on internal derangements of the knee, the most common form relating to the internal semilunar cartilage. He described the method of diagnosis, and then the reduction during the acute stage, after the acute symptoms are over, and when several recurrences have taken place. He refuses to operate in any case seen immediately after the first displacement, for, so many patients get well under appropriate treatment. He does not encourage operation in painless recurrent trouble not followed by joint effusion, but advocates it where recurrence is followed by acute symptoms and where a strenuous athletic life is a means of livelihood or a physical necessity. He has a real dread of accidental infection of the knee-joint, which is peculiarly susceptible thereto, and avoids operating in presence of effusion or moving the joint during operation. He prefers the limb to hang in flexion over the end of the table.

Dr. Robert Milne, of London, said he had met with the following pathological conditions of the internal semilunar cartilage: longitudinal splitting of the cartilage; complete separation of its anterior end; and a transverse tear and separation of the posterior end of the cartilage.

In the Specialty Section, on the same evening, Prof. E. Schmiegelow, of Copenhagen, read a paper on the results of laryngofissure for intrinsic cancer of the larynx, based on 33 cases handled, in which there were three-years' cure in 11 cases, one- to three-years' in 7, recurrence in 10, death from operation in 5. In a table combining these figures with those of Semon, Chiari, and Sir St. Clair Thomson, the totals were: cases, 96; three-years' cure, 44; under three-years' cure, 17; under one-year, 1; recurrence, 25; besides deaths from operation, 9. Thus, 63½ percent of 96 patients remained cured after more than one year. He described his method of operating.

Sir St. Clair Thomson, in discussing the paper, commended the greater alertness in Denmark to discern conditions relievable by operation. He endorsed Schmiegelow's teaching and technic. He had had 17 operations, without a death, with 2 recurrences, and 15 cases without recurrence, 5 of them remaining well for more than three years.

Dr. J. M. West, of Baltimore and Berlin, described the intranasal surgery of the lacrimal apparatus, based on an experience in 225 operations. Dr. D. R. Paterson, of

Cardiff, supported Dr. West's contentions, and spoke hopefully, though not dogmatically, as to the permanence of relief in recent cases. Dr. Charles W. Richardson, of Washington, read a paper on congenital atresia of the post-nasal orifice, which was discussed by Dr. Dundas Grant, of London.

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On Wednesday, July 30, Dr. George E. Armstrong, of Montreal, read a very interesting paper on typhoid perforation. He spoke of the very heavy mortality in Canada and the United States, in the four years 1909 to 1912, inclusive, from a disease which could be surely arrested, by act of parliament and municipal legislation, through a pure water supply and sufficient drainage, and asked why towns and cities should not be made as responsible financially for loss of time and life from a preventable disease as transportation companies were made responsible for preventable accidents.

Recent figures of 9713 cases in England, Canada, and the United States showed that more than one-third of the deaths from typhoid fever resulted from perforation, which was more common in men than in women, and more in adults than in children. He contended that, generally speaking, it would be true to say that a typhoid perforation not closed by the surgeon always was fatal, the only exception being where a perforation of the large bowel occurred between the layers of its mesenteric attachment. He discussed the early symptoms in detail, placing pain first (75 percent of his series of 83 cases), then change in the patient's expression (65 percent very definite, 28 percent gradual), tenderness (88 percent), rigidity (85 percent). Little or no value, he said, could be attached to the absence of liver dulness. The fall in temperature often spoken of rarely occurred; in one case the temperature rose, from normal, to 104° F., in two hours. The pulse quickened in 95 percent, a rapid change from slow and full to rapid and small was frequent.

It must be admitted, however, that perforation in typhoid fever might take place without any suggestive symptoms, and the failure to find a perforation upon operation did not necessarily reflect upon the diagnostician's skill and judgment. Persistent pain, definite change for the worse in the patient's expression, abdominal or rectal tenderness, rounding up of the abdomen, and increased tenderness on pressure rendered the likelihood of perforation very great, even without alteration in temperature or pulse and in the absence of vomiting.

As a rule, he preferred local anesthesia: a 1-percent solution of novocaine with 2 drops of adrenalin to the dram. The perforation was nearly always found in the last 12 or 24 inches of the ileum. Generally two through-and-through sutures closed the opening, two rows of fine Lembert sutures completing the operation. Multiple perforation should always be looked for.

The paper was discussed by Sir Anthony Bowlby, of London, who said that a survey of his operative cases from 1896 to 1913 showed his experience of fatal typhoid accidents to be limited by the diminution of typhoid and typhoid mortality that had taken place in this country. From 1870 to 1880, deaths from perforation were 23 percent; 1880 to 1890, 20 percent; 1890 to 1900, 17 percent; 1900 to 1910, 9 percent; 1911, 7 percent; and 1912, 4 percent. The South African war, however, had given him a much larger experience with typhoid fever. He agreed that most cases of supposed recovery after perforation without surgical intervention were not really cases of perforation, a condition which almost invariably was fatal unless operation be performed. A sufficiently early diagnosis for useful operation generally could be made.

He urged that in typhoid cases preliminary arrangements for immediate operation should always be kept ready. More than half the cases of perforation were not given the chance of operation. Sudden large hemorrhages conduced to the liability. A blood count should be made as a routine measure two or three times a week in all cases of typhoid fever. He agreed with Doctor Armstrong as to the significance of the patient's expression. A rigor after the second week should always excite suspicion.

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The extremely interesting paper by Dr. C. H. Mayo—"of the world," as Doctor Murphy happily introduced him—on the primary and late results of operation in exophthalmic goiter is entirely too full of meat to admit of adequate condensation. Like many of the other papers above referred to, it will be found at length in *The Lancet* of August 1, and will doubtless be made accessible to American readers in one or the other of their weeklies.

Doctor Mayo was listened to very attentively by a large and representative gathering as he discussed in detail the pathology, the history of the operation, the various types of goiter, the methods of operation by ligation, sympathectomy, thyroidectomy, and

the mortality, and reported in brief the results of 18 cases at periods ranging from one to seven years after operation. Up to June 15, 1914, 6868 operations had been performed for goiter in the Mayo clinic.

The paper was very ably discussed, chiefly on the clinical side, by Dr. James Berry, of London, who said that his experience was only in hundreds, not in thousands, like that of Doctor Mayo's. He had done 966 operations for removal of goiter, or, including ligation of thyroid arteries, a little over 1000. While at first opposed to operation in exophthalmic goiter as too dangerous, experience and improvement in technic had altered his views. He referred to Doctor Mayo's view, that operation should be avoided during mental irritability, muscular weakness, and acute cardiac dilatation, and said that in many severe cases ligation of a superior thyroid artery could be safely and usefully performed when large procedures were not justified. He had performed 215 operations for hyperthyroidism since 1912, of which 42 were in well-marked exophthalmic goiter, with 1 death; in the other 173, there were 2 deaths. Nearly all the patients were markedly benefited, generally and locally.

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The special discussions on Wednesday evening were as follows: Skiagraphy of the mastoid region and its use in the detection of disease, by Dr. Logan Turner, of Edinburg; discussed by Mr. Sidney Scott, of London. Considerations which determine the extent of an operation in septic invasion of the lateral sinus, by Dr. H. E. Jones, of Liverpool; discussed by Dr. Hunter Tod. Oculomotor paralysis of otitic origin, by Dr. F. H. Westmacott, of Manchester; discussed by Dr. Dan McKenzie, of London.

In my next letter, I hope to present a brief abstract of the remaining papers of the Congress and a few desultory notes in conclusion—that is, if the utter dislocation of all the proceedings of normal life which this fateful war threatens will permit.

"K"

London

ACIDITY AND FOOD POISONS

Your much valued American Journal of Clinical Medicine is taken by my office partner, Dr. T. N. Rogers, and I beg leave to make reply to the article by T. G. Atkinson in the July number.

Every medical journal that comes into our office contains articles on acidemia, its etiology, treatment, and methods of urinary analysis.

The whole nation seems to be sour, physically, mentally, and morally. The doctors advise soda, and look wise.

The admitted method of treatment of all human ills is, to remove the cause, but the administration of alkali only increases the generation of acid by the body, thereby doing harm instead of good.

The only rational treatment of acidemia is, to cease the ingestion both of alkalis and acids and let nature run its laboratory unhindered.

Doctor Atkinson tells us that tomatoes do not cause cancer, and I do not know that they do; but I do know that tomatoes increase acidemia, and it is my belief that acidemia plays an important part in the cause of cancer. Consequently I am of the opinion that certain people are injured by tomatoes, and that, if a cancerous condition is impending or present, it is advisable to consider carefully the use of tomatoes as a food by such individuals.

It is a common thing to find people who crave sour foods, and it is my observation that such persons generally have some disturbance of the stomach or liver.

Instead of blindly following the dictates of a diseased stomach by indulging largely in tomatoes, vinegar, pickles, acid fruits, acid drinks, and so on, I advise the correction of the stomach or liver trouble, whereupon the craving will soon be forgotten.

The craving for tobacco and liquor I have frequently found to originate from the same causes, and the administration of leptandrin will produce excellent results in tobacco chewers by its action upon the liver.

The Remsen Board may tell us that alum is innocuous, but it is my belief that minerals in general that are not components of the human body were wisely left out by our Creator, and I do not intend to try to improve upon nature.

Doctor Wiley gave us a scientific and honest administration, and the conscienceless food venders have been busy ever since trying to discredit him; but the American people are going to stick by Wiley, and what the Remsen Board or any other board has to say about it, will not be believed.

Food preservatives of all kinds should be labeled "poison," and it is only a question of an honest food commission as to what their decision is.

Tin poisoning is very similar to catarrh and consumption, and all foods in tin cans should

be taboo in such cases. If you wish to test the solubility of tin, put some water into a tin pan, either new or old, and within an hour you can taste the tin plainly. Then can you still doubt that all food in tin cans is impregnated with tin? If so, does it not look reasonable that the American nation is being poisoned with tin?

Then take down a homeopathic materia medica and compare the symptoms of tin poisoning with those of consumption, and you will be somewhat surprised.

All disease is caused by perversion of function; that is to say, if the body is in perfect condition, it is immune to disease. So, the only rational way of fighting the white plague is, to study out the many hundreds of ways in which we transgress the laws of nature.

That the ingestion of foods preserved in tin cans, and all the other manufactured foods, plays an important part in weakening the human race, is not a new thought, and the sooner we acknowledge it as a profession and start the fight in the right direction, the sooner will we, as a profession, reclaim our natural right to the old respect in which we were formerly held by the people.

C. L. Fairbanks.

Sault Ste. Marie, Mich.

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[We referred Doctor Fairbanks' letter to Doctor Atkinson, author of the little paper titled "Concerning Baking Powder," which the former here has criticized. The latter's comment follows:

"Doctor Fairbanks has let off an amazing charge of grape-shot at my modest, unpretentious article, hitting all around the subject with bewildering versatility, but, so far as I can discover, not making much of a dent in the bullseye.

"Certainly, I had no idea I was raising the vexed question of acidemia, its causes and treatment; and I really must humbly decline to enter into a detailed discussion of this problem here, as I am allowed only a little bit of space in which to make this rejoiner. I might remark, in passing, however, that, if the doctor is going to observe rigidly his determination to cease the ingestion both of alkalis and acids, I fear he is doomed to a rather restricted diet. The cause of cancer, the significance of perverted gastric cravings, and the pathology of tobacco and liquor addiction—interesting subjects as they are—I must also beg Doctor Fairbanks to excuse me from discussing, as being rather wide of the aim and content of my article on baking powders.

"The real animus of the Doctor's letter, so far as it actually relates to my article, seems to be a rush to the defense of Doctor Wiley against the findings of the Remsen Board. He appears to resent the fact that the Remsen Board should have handed down a decision in conflict with the rulings of the former chief chemist of the Bureau of Chemistry. Indeed, his feeling is so strong in the matter that it impels him absolutely to refuse to see the plain facts which the Remsen Board has established, just because they come *via* the Remsen Board. The American people, he says, (by which, of course, he means himself, since no man can speak for any wider circle), are going to stick by Wiley, and what the Remsen Board or any other board has to say about it will not be believed.

"But isn't that a good deal like shouting, 'My country, right or wrong?' And isn't that rather a foolish attitude for a scientific man? I have no quarrel with Doctor Wiley or with the honesty of his administration. Neither do I hold any brief for the Remsen Board. None of these gentlemen knows me, or I them. It is not a question of what Doctor Wiley says or what the Remsen Board says, but of the facts; and nobody has any monopoly on facts—you and I can prove them just as well as the Remsen Board could, and did.

"That's just the difference between *ex officio* rulings of a government department and the findings of a scientific board with no authority behind it except what it derives from indisputable facts. You and I can neither question nor overturn government rulings; but we can verify or disprove scientific findings to our hearts' content. So the matter of the harmlessness of alum in baking-powders is not a question of credibility as between Doctor Wiley and the Remsen Board; it is a matter of fact, which happened to be demonstrated by the Remsen Board, but could just as well have been demonstrated by Doctor Fairbanks himself.

"Tin poisoning is another subject which I cannot allow myself to go into here. I may agree with a great deal of Doctor Fairbanks' position on this subject, but it does not concern the wholesomeness of baking-powder since these are packed dry and therefore do not involve the question of the solubility of tin."—Ed.]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

[*Continued from page 838*]

THE tonic hysteric spasm condition is succeeded by the clonic phase. The muscles of the face and limbs are thrown into rhythmic movements. Consciousness is blunted. The final phase of the first period is that of resolution. The patient becomes relaxed, lies with head to one side, and there is much sialorrhea. In only exceptional cases is there incontinence of urine or of feces. Slight sleep may occur.

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After a short interval the second period sets in, and because of its extravagantly disordered contortions and its seemingly regulated purposive performances it has been called the period of "clownism." The most common movement in this stage, as J. Hendrie Lloyd points out, is the socalled "arc of a circle," in which the patient assumes a position either of complete or of incomplete opisthotonos. The patient may assume this position lying either on her back or on her side. Other movements of extreme contortion occur. Sauvages applied the term hysteria libidinosa to cases in which, during convulsion, the patient alternates rapidly from opisthotonos to dorsal decubitus.

The most common of the regulated types is, as Lloyd remarks, that called "salutation," in which the patient, lying on her back, suddenly bends the body forward until the head almost touches the knees; this being repeated many times. Others consist in bending and arching the body and flexing and extending the limbs in various ways, rapidly repeated, usually while the patient reclines on her bed.

This extreme motor agitation seems to have a mental association or to be the expression of a mental state. Sometimes this mental disorder appears to bystanders to be quite alarming and may seem to have a veritable demoniac element in it. There is no loss of consciousness during the second period. The patient seems to react to some mental stimulus, but there is not the association with delusions and hallucinations that occur in the next period.

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The next, or third, period has been called by Charcot the period of passionate attitudes. In this period, Breuer and Freud see the hallucinatory reproduction of a recollection which is full of significance for the origin of the hysteric manifestations. Freud believes that in nearly every case a primary lesion of the sexual emotional sphere exists, and dating from puberty. In nearly every case, the intimately private nature of the lesion causes it to be carefully hidden and to be forcibly ignored, mentally, by the victim of it.

During this third period, the patient does not feel pain or touch. The conjunctivæ are insensible. Hearing is lost. The patient is unconscious or oblivious after the attack, although some remembrances of the period may be retained. It is very dangerous, however, to accept such remembrances as facts, since the patient may so clearly remember her sexual emotional state as to ascribe to it an objective origin for which someone else is responsible.

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The fourth period has been denominated by Charcot the "period of *delire*." "Delire" is not synonymous with delirium, but simply indicates an intellectual disturbance which may or may not involve the emotional sphere. Practically, this period is the returning to self-consciousness from the previous period of emotional disturbance. During this period, according to Lloyd, the sensory stigmata seen in the third stage may here persist. Added to them, are motor stigmata generally absent before. The most common of the latter are various forms of contracture, and which may persist for days after the seizure. Other motor stigmata sometimes originating in this period and persisting as relics or the convulsion are the several varieties of paralysis and tremor. The mental state may pass into an

obstinate mutism or even into trance or lethargy.

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Charcot, in 1888, claimed that socalled hysteric unilateral paralysis of the facial, lingual, and oculomotor muscles are, in reality, hemispasms. This view of Charcot was later abandoned by himself and his followers. Hitzig, of Halle (Germany) has shown that disorders of the oculomotor mechanisms are comparatively rare in hysteria, although derangements of the visual fields and phenomena owing to fatigue are very common. He reports the case of a 36-year-old Polish laborer who had previously suffered from "inflammation of the eyes."

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The man had indulged freely in whisky. In August, 1895, he wounded himself in the leg. The wound healed rapidly, but unfortunately he conceived the idea that, as there had been no suppuration, inflammation would occur elsewhere. After a week, inflammation actually did appear in the eyes, followed by diplopia and lid ptosis. This condition lasted a long time without distressing him, but when he found himself unable to see his children, who had returned home in September, 1896, he attempted suicide by drowning, an for two days appeared insane. Upon admission (September, 1896), there was complete ptosis of the lids on both sides; both eyes were turned inward and downward. Later (in November), the pupils did not react to light and the patient professed to be seeing nothing. There was no evidence of any spasm of the orbicularis muscles. There was partial unilateral loss of taste and smell. Tactile sensation was absent over the whole body and there was analgesia in the right arm, left leg, and left half of the trunk, neck, and head.

Temporary improvement in the eye symptoms had followed chloroform narcosis in October, but their complete disappearance followed electricity and suggestion in November. A temporary partial hysterical deafness was likewise recovered from. In January, 1897, the patient's condition was practically normal in every respect. Some of the eye symptoms were evidently due to spasm, namely, the squinting and the myosis.

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Hitzig ascribed these phenomena to hysteric paralysis of the levator muscles of the eyelids. Kiernen reports a case which corroborates that reported by Hitzig. The patient, a 33-year-old married multipara, comes from a family rife with neurotic taint. Neuroses of various types are frequent in this family for three generations. One sister has periodical attacks of nymphomania, whose morbid nature she recognized and therefore was able to control herself. The other children suffered from cerebral phenomena from very slight causes. One brother had had infantile hemiplegia, with athetoid phenomena. There had been numerous children for three generations, the greater portion of whom died in infancy.

The present patient had visceral neuroses, simulating at times peritonitis and gallstone colic and attended by pyrexia, followed by apyretic states, when the temperature fell, from 109°, to 90° F. in a few hours, without corresponding constitutional disturbances. Paralysis and local anesthesia were easily produced in this state through suggestion. On one occasion discolorations of the skin resulted from an accidental suggestion that the skin looked slightly reddened at the seat of a paresthesia.

The patient had an attack of "visceralgia" simulating gallstone colic. This left her much exhausted, and in this state the suggestion was made by a neighbor that her eyes looked weak; whereupon slight amblyopia resulted, followed by double ptosis. The "visceralgia" disappeared under what was chiefly moral treatment, but the ptosis persisted for some weeks. One day while the patient was relating her symptoms a window fell and she passed into a hypnotic state. While in this state the suggestion was made that her ptosis was under full control of her will and that she would hereafter be able to control it. On her awakening from the hypnotic state the ptosis and amblyopia disappeared.

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The last attack occurred under the following circumstances: The patient, while east, had been treated for headache, by the correction, with glasses, of refractive errors. Soon after her return to Chicago, she suffered from a very obstinate sub-occipital headache. Through much talk by her friends, she was persuaded that this headache was of optical origin and that the glasses had been improperly fitted. She was found to be badly constipated. The persuasion, however, that the eye had been improperly fitted with glasses continued. She finally had a recurrence of the old symptoms of ptosis and amblyopia. This condition, however, disappeared with the disappearance of the headache, which yielded very rapidly to dietetic treatment and cathartics. Since this time there has been no

return of the ptosis and the patient has not complained either of eye-strain or headache.

According to Galezowski, Parinaud, and Borel, a true hysteric myopia or hyperopia may occur. The typical globus hystericus in the opinion of Preston is, in part at least, a contracture. Some patients describe this peculiar phenomenon as a ball which begins in the region of the stomach and rapidly ascends to the throat. When it has reached the throat it remains a greater or less length of time in that position. Rarely the ball seems a very small body in the throat, and, again, merely a sense of constriction. While perhaps a large part of this phenomenon is purely psychic and belongs to the category of sensory disturbances, it is probable that there is present more or less contracture of muscle-fiber.

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Contracture of the bladder, with retention of urine, is not uncommon. It should be remembered, however, that the bladder, as Mosso and Pelacani have shown, is an even more delicate esthesiometer than the iris, and probably the most delicate in the body.

Mosso and Pelacani found that contraction of the bladder follows directly upon the slightest stimulation of any sensory nerve, and also that all the varying conditions of the organism which raise the blood pressure and excite the respiratory centers produce an immediate and measurable effect upon the bladder. These investigators found by experiments upon several young women that, when a plethysmograph was brought into connection with the bladder, even a slight touch with the finger on the back of the subject's hand produced a noticeable contraction of the bladder; and, whenever the subject spoke or was spoken to or made the slightest mental exertion, there was a similar contraction. These reactions are much more delicate than those of the blood-vessels and cannot be paralleled by any other part of the organism.

The bladder, as Born puts it, is the mirror of the soul. It would be equally correct to say that, to some extent, the soul is the mirror of the bladder. The fainter vesical contractions cannot be said to play a recognizable part in emotion, but when they attain a somewhat higher degree of intensity they form a well-recognized part. "A nervous bladder," as Goodell puts it, "is one of the earliest symptoms of a nervous brain." Contraction of the bladder plays a part in the constitution of various emotional states of fear, anxiety, and suspense.

As regards the diagnosis of hysteria, it must be remembered that hysteria bears the same relation to neurasthenia that paretic dementia does to locomotor ataxia; that is to say, hysteria is the cerebral type of a neurosis the spinal symptoms of which are commonest in neurasthenia.

Since hysteria may be produced by any condition causing nervous disorder or disease, it may complicate every one of the great neuroses, as well as the great constitutional disorders. It may occur as a temporary expression of conditions of autointoxication or during the period of nervous adynamia after exhausting diseases. When it occurs in degenerate organisms or, more properly, in organisms hereditarily defective, the disorder will be peculiarly protracted and the nerve symptoms will simulate organic diseases to a marked degree.

It will thus be seen that in diagnosis the underlying state of the hysteric has to be taken into consideration.

ADRENALIN AS AN ANALGESIC

A very interesting subject was brought up at the April meeting at Wiesbaden of the German Congress for Internal Medicine, in a paper read by R. Schmidt, of Prague, who discussed (*Muench. Med. Woch.*, No. 20, p. 1141) the probable reason for the differing sensibility of individuals to pain, as also its variability in the same person. Interest in this problem, the speaker thought, would grow if it could be demonstrated that this characteristic is determined by specific substances in the blood and body-fluids which definitely affect pain-sensation, whether in the sense of augmenting or of diminishing the same.

Such a relationship Schmidt believes can be attributed to the adrenalin in the circulation, as shown by practical experience. Thus, from among his experiments he relates how the hypodermic injection of this substance on the anterior aspect of the thigh had resulted in great relief to arthritic patients; often the salicylates becoming unnecessary, even. In fact, adrenalin can positively be classed with analgesics.

These statements were fully corroborated by Gudzent, of Berlin, who also has seen excellent results from this agent in a large percentage of cases of polyarthritis. The latter has employed a 1-percent solution of adrenalin intramuscularly.

Among the Books

NUTT: "DISEASES OF THE FOOT"

Diseases and Deformities of the Foot. By John Joseph Nutt, B. L., M. D., surgeon-in-chief, New York State Hospital for Crippled and Deformed Children. Illustrated. New York: E. B. Treat & Co. 1913.

To Messrs. Treat & Co. we are indebted for a great many monographs on various phases of medicine and surgery. The monograph is an exceedingly valuable form of medical literature, whether it be of a purely scientific or of a clinical character, since it is always sure to contain vital, original matter, fresh-forged on the red-hot anvil of the author's personal experience; and that, after all, is the sort of contribution to any science or art that counts.

The author of this little monograph on diseases and deformities of the foot has had ample opportunity for study and practice of the subject whereof he writes, and he has taken full advantage of it. As a result of his years of experience in orthopedic work, he has become convinced that the foot and its treatment separates itself out from the rest of orthopedics, because of its simplicity and the readiness with which the general practitioner can prevent deformities and correct abuses and treat minor diseases of the bones and joints of the foot. Every kind of disease and deformity of the foot which the practitioner can possibly be called upon to treat is here described and dealt with by a man who is thoroughly at home with his subject.

PATERSON: "ANATOMIST'S NOTE-BOOK"

The Anatomist's Notebook: A Guide to the Dissection of the Human Body. By A. Melville Paterson, M. D., F. R. C. S., professor of anatomy, University of Liverpool. London: The Oxford University Press. 1914.

This is purely and simply a working-notebook for use in the dissecting-room, and is, as the author naively writes in his preface, "to be supplemented by means of a knowledge of osteology and by a systematic textbook."

In the matter of arrangement, the body is divided, for dissection purposes, into head, thorax, abdomen, and limbs. Otherwise, the work is laid out in accordance with the routine practice customary in English medical schools, and which does not materially differ from that in our own colleges. The text is plentifully interspersed with blank pages for the student's notes, besides containing rough working-drawings, which the student is expected to fill in with the details as he develops them with his scalpel.

The whole plan of the notebook is an excellent one, and we do not doubt that many medical schools in this country will adopt it in their anatomical laboratories. But, its value does not cease with the close of the dissecting-course; it is a capital memorizer and reference-book for subsequent years, even after the student shall have become a practitioner.

LOWRY: "THE HOME NURSE"

The Home Nurse. By E. B. Lowry, M. D., author of "Herself," "Confidences," "Truths," etc. Chicago: Forbes & Co. 1914. Price $1.00.

The engagement of a trained nurse in the home is not always practicable in every instance of sickness. Some patients cannot afford her services; others are not sick enough to make a trained nurse necessary; and there are various other reasons why she cannot be in attendance in every sick-room. How, then, shall we take care of this great class of patients? It would seem that the only solution to the rather vexing problem is the home-trained nurse—the mother, the wife or other member of the family, properly instructed to take care of any sick person.

But, if such a person is to fulfill the demands of modern treatment, she must have a certain amount of technical training. And how, then, shall the home nurse be trained?

Well, here is the answer to that question, right here in our hands. Advise your patrons to procure a copy of Lowry's book, and to read, mark, learn, and inwardly digest the simple but valuable matter that it contains; not to wait for emergencies to drive them to the book, but, on the principle, "In time of

peace prepare for war," to peruse it thoughtfully and attentively at their leisure, so that when sickness comes and they are called upon to play their part they may be competent to undertake it.

This home nursing, of course, is not intended to replace or supplant the hospital-trained nurse; still, we repeat, there are many occasions when the doctor is obliged to depend upon some member of the household; and for such times it is well to be prepared.

YEAR-BOOK: "PRACTICAL MEDICINE SERIES"

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the general editorial charge of Charles L. Mix, A. M., M. D. Chicago: The Year Book Publishers.

Skin and Venereal Diseases, and Miscellaneous Topics. Edited by W. L. Baum, M. D., and Harold N. Moyer, M. D. Series of 1913, Volume IX. Price $1.35.

Nervous and Mental Diseases. Edited by Hugh T. Patrick, M. D., and Peter Bassoe, M. D. Series of 1913, Volume X. Price $1.35.

The two volumes here named complete the year's series of this annual. The current literature on the subjects in question has been selected and abstracted in the same careful and discriminating fashion as in the previous volumes. It is impossible adequately to review books of this kind, since they are themselves in the nature of a review of the progress made during the year which they represent. They furnish an excellent medium through which the practitioner may keep himself in line with the rapid advance movement in medical science and practice. The best plan, of course, is, to subscribe for the entire series, at the rate of $10 per year; but those who are interested only in certain departments of work can obtain single volumes at prices ranging from $1.25 to $1.50—an extremely low figure, considering the valuable matter they contain.

STEDMAN: "HANDBOOK OF THE MEDICAL SCIENCES"

A Reference Handbook of the Medical Sciences. Edited by Thomas L. Stedman, A. M., M. D. Complete in Eight Volumes. Third edition, revised and enlarged. Volume III. New York: William Wood & Co. 1914. Price $7.00.

In the nature of things, it is impossible to pick out any particular items or features of a work, like this one, for special commendation or criticism, since it is a part of the purpose and method of the indertaking to give every subject thorough and masterly treatment, according to the importance which that subject holds in the present-day system of medicine. All one can venture to say is, whether or not this has been done, on the whole, with proper discrimination and judgment; and we do not hesitate to affirm that it has, at least in the volume before us. Doctor Stedman has over and over again proved his ability and discretion as an editor of large reference-books; and in this largest of all his efforts in this direction he has amply justified himself.

While the alphabetical arrangement does not, in this volume, carry us as far as the word Eye, yet, the various aspects of the eye and its diseases come in for a large share of attention. So do the ear, the digestive tract, and several other important structures. At the latter end of the book there is a large section devoted to electricity and all of its medical modes and applications, the treatment of which is splendidly up to date and complete.

RANKIN: "ELEMENTS OF BANDAGING"

The Elements of Bandaging, and the Treatment of Fractures and Dislocations. By William Rankin, M. A., M. B., Ch. B., of the Western Infirmary, Glasgow. With 68 original illustrations. London: The Oxford University Press. 1913. Price $1.50.

In the British medical schools—which, by the way, are all hospital-schools, i. e., the hospitals own and control the schools—it is the rule that every student in his senior year shall spend a certain number of months or weeks in the wards of the hospital as a "dresser." It is an excellent practice, for it insures, as a matter of routine, that every student shall receive a thorough practical training in this most important part of a doctor's daily work, and for which the American student but too often depends upon the experience of an interneship that does not materialize.

This little manual of Rankin's is based upon demonstrations of bandaging and the management of fractures and dislocations as made by him and his assistants in this ward routine. It deals, as the author aptly says, with "details which are not handily found in most textbooks," and is intended for those

whose experience in this direction is limited. Greatest stress is laid upon the commonest conditions and the everyday complications. Simplicity is the keynote of the book; however, the author assures us that every procedure and method described is one which has proved most satisfactory in actual practice. The illustrations are capital. It is a most helpful little book.

BALLENGER: "NOSE, THROAT, AND EAR"

Diseases of the Nose, Throat, and Ear: Medical and Surgical. By William Lincoln Ballenger, M. D., professor of otology, rhinology, and laryngology, College of Physicians and Surgeons, Chicago. Fourth edition, revised and enlarged, with 536 engravings and 33 plates. Philadelphia and New York: Lea & Febiger. 1914. Price $5.00.

That Professor Ballenger's book is achieving the success that it deserves, is evident from its rapid passage into a fourth edition. And this, in turn, does, in our opinion, but evidence the good taste and judgment of the medical public: for, to our thinking, Ballenger's "Diseases of the Nose, Throat, and Ear" stands without a serious rival among the practical works on the subject on this side of the Atlantic.

The call for a new edition has been utilized by the author to give the book an entire overhauling and to bring every part of it fully up to the present. However, the most noteworthy changes and additions will be found in the chapters devoted to the labyrinth, great care having been bestowed upon them, so that this subject is here presented with a fulness and thoroughness unequalled in any other textbook of its kind.

To give a few details: 13 original colored plates illustrate the physiological and pathological manifestations of nystagmus, a careful study of which will alone suffice to convey a clear idea of the nature of that condition. Every necessary operation involved is illustrated, while the technic invariably is outlined in terms that can not be misunderstood. The work appeals equally to the specialist and the general practitioner, and undoubtedly will continue to enjoy the popularity that necessitates for four editions within but six years.

HOPKIRK: "INFLUENZA"

Influenza: Its History, Nature, Cause, and Treatment. By Arthur F. Hopkirk, M. D., London: The Walter Scott Publishing Company, Ltd.; and New York: Charles Scribner's Sons. 1914.

This monograph presents an intelligible résumé of the history of influenza, from the earliest times up to the most recent English epidemic, and is compiled from the works of trustworthy chroniclers and investigators. In addition, it presents a more or less critical account of the views that have obtained at various times as to the epidemiology and etiology of the disease, as well as a detailed description of the different varieties of the malady, and of the treatment to be followed in the case of each of them.

In the chronological survey, the supposed place of origin, the course, and the geographical distribution of each epidemic is given; also, any particular symptoms that prevailed are noted, while the treatment employed is stated where this is possible. Meteorological phenomena are recorded, also the prevalence of other epidemic diseases or of epizootics before, during, or after each visitation of influenza.

In the sixth chapter, the whole question of treatment, medicinal and dietetic, is thoroughly gone into. Due attention is paid also to such questions as isolation, the sick-room, disinfection, nursing, the after-effects of influenza, convalescence, and so on. An appendix contains useful recipes for invalid cookery. Technical terms, the use of which could not be avoided, are explained in a glossary.

RYAN: "FIRST-AID DENTISTRY

First-Aid Dentistry. By E. P. R. Ryan, lieutenant dental surgeon, U. S. Army. With 80 illustrations. Philadelphia: P. Blakiston's Son & Co. 1914. Price $1.25.

Since dentistry became separated from medicine, these two disciplines have grown very far apart; much *too* far. The dentist knows or cares but little about the physiology and pathology, not to say the therapy, of the human body in general; and the physician, on his part, we fear, knows still less about the disorders and the treatment of the teeth. Called upon to render aid to an aching or disabled tooth, the doctor is just about as helpless and dumb as is a plain layman.

Doctor Ryan evidently recognizes this deplorable state of affairs, and, in a modest way, contributes his share toward remedying it. Not that his little book offers any plan for reuniting the two sciences or professions, of course; but it undertakes the more modest task of furnishing the medical man a little

practical knowledge of first-aid dentistry, so that at least in emergencies he may not find himself altogether at sea.

The author manifestly is a master of his subject and knows how to impart it in a thoroughly practical, helpful manner. The chapter on extractions is almost enough to make an expert extractor out of one who has never before had a forceps in his hand. The illustrations are capital; a great deal of credit for the efficiency of the bock must be given the artist who took the photographs.

BURR: "PSYCHOLOGY AND MENTAL DISEASE"

Handbook of Psychology and Mental Disease. For Attendants, Nurses, Medical Classes, and Practitioners. By C. B. Burr, M. D., medical director of Oak Grove Hospital for Mental and Nervous Diseases. Fourth edition, revised and enlarged. With illustrations. Philadelphia: F. A. Davis & Co. 1914.

Author and publisher are to be commended, and the medical public (especially the medical student body) is to be congratulated upon producing at such a reasonable price so excellent a little book. Satisfactory treatises upon mental diseases, that combine scholarship with practical usefulness, are all too rare, and, thus, we value Doctor Burr's manual as a distinct acquisition to this class of medical literature. With refreshing clearness and remarkable power of terseness, he has contrived to link psychology and clinical phenomena in brief logical sequence, after a fashion that will delight the heart of the student, to whom alienism is generally a *bête noir*. Not many illustrations are incorporated, to be sure, for the subject is one that does not lend itself readily to portraiture; still, such as there are will be found of illuminating value.

We venture the assertion that the present edition will be as well received by reachets and students of mental diseases as cordially as have been the previous editions, and that this manual will continue to fill a real need in educational medicine.

HOYT: "PRACTICAL THERAPEUTICS"

Practical Therapeutics. By Daniel M. Hoyt, M. D., formerly instructor in therapeutics, University of Pennsylvania. Second edition, revised and rewritten. St. Louis: The C. V. Mosby Company. 1914. Price $5.00.

The feature of this new edition of Hoyt's "Therapeutics" calling for special mention is its unique arrangement. By it, the reader has spread before him, at a glance, the nomenclature of the drug, its physiological action, in most instances also its specific action upon different organs (such as the brain, spinal cord, heart, arteries, skin, and intestines), the toxicology and antidotes, and the therapeutic indications and contraindications.

The text gives a description of all new and nonofficial drugs that have been passed by the Council of Chemistry and Pharmacy of the American Medical Association, followed by the indications for the use; it also gives the formulas and values of most proprietary remedies. Furthermore, it tells the dispensing physician what drugs he can use with greatest satisfaction to himself and to his patients. The therapeutic index will be found a handy time-saver to the busy practitioner. Altogether, this is a decidedly practical and helpful book, well worth its price to any physician.

JACKSON: "DISEASES OF THE SKIN"

The Ready-Reference Handbook of Diseases of the Skin. By George Thomas Jackson, M. D., late professor of dermatology, College of Physicians and Surgeons, New York. With 115 illustrations and 6 plates. Seventh edition, thoroughly revised. New York and Philadelphia: Lea & Febiger. 1914.

We are not surprised that Doctor Jackson's work has attained to a seventh edition. There are none too many authoritative books on dermatology. Too often the subject is made a sort of adjunct to genitourinary specialties and comes to be largely a study of the cutaneous manifestations of syphilis. On the other hand, there is hardly any branch of medicine in which the ordinary practitioner stands in such crying need of definite, authoritative teaching as in this same department of skin diseases.

The present edition of this handbook has been thoroughly revised and brought up to the high-water mark of latter-day diagnostics and therapeutics, and thus is a distinct credit both to author and publishers. The only real criticism we have to offer (and we believe the same criticism was made in reviewing previous editions) is that it would have been a vast improvement if more of the illustrations had been in appropriate colors, for the reason that color plays so essential a part in the diagnosis of skin lesions.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6034.—"Tumor Over Spine in Lumbar Region." O. H. S., Indiana, has under his care a young man twenty-five years of age who presents a growth in the lumbar region, near the spine, which resembles a sebaceous tumor; however, the hypodermic syringe, using a large needle, only brought out a bloody serum, while quite free hemorrhage occurred from the puncture. The tumor is 1 3-4 inches in diameter, movable, and the veins over it are rather prominent. The Doctor wishes to know whether it is advisable to remove this growth, or whether operation might produce a troublesome hemorrhage. The tumor has been coming on for five or six years. The patient experiences "darting pains" in the tumor; there is no pulsation; upon introducing the needle, it seemed to plunge into a cavity.

With our limited information about the nature of this growth, it is impossible to express a positive opinion as to the advisability of operation. The fact that the patient complains of darting pains in the tumor, and its situation over the spine and the discharge of bloody serum, calls for cautious procedure.

If you will send a specimen of the serum to a pathologist for examination, and outline diagrammatically the exact position of the tumor, we presumably shall be in a position to answer you more intelligently.

Are you quite sure that you did not puncture a superficial vessel? In inserting the needle, to secure serum, carefully avoid puncturing any vein. Examine the base of the growth very carefully and report exact conditions.

It is possible that you are dealing with a myoma. Myomata—sessile tumors over the lumbar fascia—generally, on section, look like colorless masses of transparent trembling jelly. These tumors frequently will recur after their removal.

We would hardly expect to find a sebaceous tumor in the lumbar region. It is just possible that the growth connects with the spinal canal and the sac contains spinal fluid.

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QUERY 6035.—"Rachitis or Congenital Syphilis?" J. M. I., Indiana, writes as follows: "A child, 14 months old, has recently come under my care. The family history is good. The father, a strong, healthy-looking man, is a miner 37 years old. He had a severe attack of rheumatism for one year preceding the birth of this child. The mother, 39 years old, also is in good health at present; during the last seven months of pregnancy, however, she suffered from vomiting all the time, and all methods of treatment failed to afford relief.

A case of Rachitis

"The child weighed 9 pounds at birth. On the fourth day a small nodule was noticed on its right upper arm, and after that such nodules began to appear on the legs and forearms. One doctor claimed the disease to be periostitis. Another one diagnosed it a case of hereditary syphilis, and initiated corresponding treatment. However, the history it seems to me to exclude both of those diseases. A third physician consulted confessed inability to guess what the trouble might be. Thus it is that for now fourteen months this ailing child has had nothing done for it.

"In view of the history of long-continued maternal vomiting and the characteristic appearance of the child, I diagnosed the case

as one of rachitis. The anterior fontanelle is about two inches wide by three long. The forearms are bent, as shown in photograph, which also shows the condition of both legs and the swollen condition of upper portion of the left femur. The rachitic rosary can be seen plainly. Observe the large head, well rounded on the left side, but decidedly flat on the right. The position of the hands, as seen here, is not constant. The child has use of its hands.

"I am giving calcium sulphide as a means of stimulating the appetite, and find that it works like a charm. I can assure the people that the appetite will return in forty-eight hours or thereabout. The child was fed dextro-maltose in cow's milk, but after a few days it could not retain the milk; consequently the dextro-maltose is now given in water. Beef-tea is given three times a week. I intend to begin giving the nucleinated phosphates. The child shows signs of improvement and has gained flesh. It has cut only two teeth, and they are decaying; or, at least, breaking off. If I am wrong in my diagnosis, I should gladly be corrected, with the argument. Besides, if there is aught that can be done for this child and that I am not doing, please say so."

If you can positively exclude syphilis (and it seems that you may), there is little question that your diagnosis is correct; namely, the child suffers from a marked form of congenital rachitis. It is true that changes in the bones of the syphilitic child are more frequently present than any other lesion; in fact, by them, usually, syphilis is definitely recognized. The long bones are principally affected, the most important changes being at the junction of the shaft with the epiphyseal cartilage. Such lesion is termed "epiphyseal osteochondritis."

In rachitis, while the only important anatomic changes are found in the bone, it must not be regarded as a bone disease, but as a complex pathological process, the result of disturbed metabolism. We have, in this case, the typical rachitic skull, open fontanelle, "rachitic rosary," protuberant belly, exaggerated curve of the long bones, and other marks. Considering this clinical picture, in conjuction with the maternal history, we think that a diagnosis of rachitis cannot successfully be questioned.

Congenital rachitis, as we need not mention, is a comparatively rare disease in this country; in the larger cities of Europe, where mothers, during pregnancy, live under the most unfavorable conditions, it is quite common, however. When the deformity is extreme, the prognosis as regards the restoration of normal conditions is unfavorable. In itself, rachitis is seldom the cause of death, although constituting a large factor in the mortality of the first few years, since it predisposes strongly to many forms of acute diseases.

The important remedies are codliver-oil, phosphorus, and the calcium salts. We should give this little patient calcium lactophosphate and the nucleinated phosphates in alternation, and in comparatively large doses (1 or 2 drams). Also, inunct each night half an ounce of codliver-oil. A highly nutritious diet is essential, of course.

In this connection, we would call attention to the chapter on the treatment of rachitis, in Candler's "Everyday Diseases of Children."

We are more than astonished at your experience with calcium sulphide and are wondering whether you do not mean calcium lactophosphate? In our practice, even 1-6 of a grain of calcium sulphide, repeated four times daily, virtually destroys the appetite, or at least modifies it to such an extent that we frequently give it to obese patients who overeat. Many, many times in the past decade the writer has been compelled to stop the administration of calcium sulphide, because the patients were unable to eat the necessary amount of food. The nucleinated phosphates were designed for use in just such cases as yours, and with codliver-oil and calcium lactophosphate will meet the requirements perfectly.

It would be well, of course, to try to correct the deformity of the long bones by graduated pressure. The earlier this is done, the better the results will be. It is more than probable, however, that osteoclasis will be necessary later on.

QUERY 6036.—"Pharyngeal Ulcer." A. W. T., California, acknowledging receipt of pathologist's report on a throat swabbing which contained many staphylococci, moderate number streptococci, few pneumococci, and few pus-cells, writes as follows:

"I should be pleased to be favored with some therapeutic suggestions regarding this case. The patient is a man 'smally' built, whose normal weight is 135 pounds, but who at this time weighs only 102 pounds. When he first consulted me, on June 25, he weighed 98 pounds, then increased within the month to 112 pounds. His temperature ranged from normal up to 104° F. at first, then went down to about normal. Now, it seems, the disease has taken on new life. Temperature

ranges from 100° to 102.5° F. and he is rapidly getting weaker. The sore in the throat, from which I sent you a swabbing, is looking fine, except that it has a tendency to spread; but pain from it is much less than formerly. I have applied, from time to time, weak solutions of formaldehyde, 25-percent lactic-acid solution, and 10-, 20-, and 25-percent silver-nitrate solution. Owing to the man's aversion to medicine, I have not given him much internally; while he is very willing to take or do anything to improve his condition he vomits so very easily that he cannot retain medicines. At present I am giving him a solution of sulphate of iron, Brodnax's formula.

"He says that since December, 1913, he gradually grew worse, and feeling as though he had fever. Before this, he had always been healthy. He is a painter. His brothers and sisters are all healthy. A brother-in-law died of tuberculosis nine years ago. His father and mother are both living. The father's age is 63; that of the mother is 63 At one time they lived with him (previously), but at the time of his death he lived about three blocks distant, but visited him every day. He says that every precaution was taken to prevent the spreading the disease.

"He had consulted other physicians before coming to me, and they pronounced his trouble 'ulceration' of the throat. The lesion, I should judge, is about the size of a half dollar piece and is situated just behind the anterior pillar. Virtually nothing of the tonsil is left. The ulcer extends almost to the median line. The other tonsil is quite small, but not inflamed."

As you will readily understand, doctor, this man may be tuberculous, yet no tubercle bacilli be present in the discharge from the throat ulcer. It is important to know the daily temperature range of the patient. We should be inclined to cauterize the ulcerated area, preferably with the electrocautery.

Thomson, in his "Diseases of the Nose and Throat," says: "Tuberculosis shows itself in (1) infiltration, (2) ulceration, (3) tumor formation, (4) acute miliary infection, and (5) healing areas by sclerosis. Secondary pyogenic infections may occur in tubercular ulcerations." We quote further.

"Unfortunately, tubercle bacilli occur scantily in discharges, and in lupus are found only with much difficulty. Lupus of the pharynx may occur primarily; more commonly it is a descending infection from the nose. . . . As the deposit increases, the surface becomes bosselated, the epithelium is destroyed, and, when the sticky secretion is wiped away, the invaded area shows gelatinous, grayish mounds, separated by narrow crevasses. There is no red aureole around the healthy margin. The favorite site is the anterior pillars of the adjoining soft palate, which loses its elasticity and becomes insensitive and wooden. The tonsils generally escape Secondary infection, with marked ulceration, may take place and destroy the tonsils, root of the tongue and adjoining soft parts. Syphilitic lesions are surrounded by an aureole of inflammation; the disease is more rapid and does not spare the tonsil.

"In this case, it is essential, in order to institute effective treatment, to ascertain definitely the character of the lesion. Wassermann and Von Pirquet reactions should be tried in order to settle the question definitely."

In nonsyphilitic lesions, the use of the cautery, and the administration of nuclein, at least 10 drops, and preferably absorbed from the buccal mucosa (instruct the patient to hold it in the mouth as long as possible), the arsenates and iodized calcium three times a day should produce results. An autogenous bacterin might be administered with advantage.

The imperfect history presented does not enable us to prescribe with assurance. As, however, you have been using formalin, lactic acid, and so on, we assume that you deem the lesion tuberculous. Thorough cleansing of such an ulcer with hydrogen-dioxide solution, and the application of orthoform and europhen have proven satisfactory in our hands. Never apply orthoform unless the ulcer has first been cleansed. Inhalations of chloretone are strongly advised by Burney Yeo. Lactic acid, if employed, should be used in strengths of 50 percent, or stronger; the object being to produce an eschar that will not separate before one, two or three weeks. When the slough is detached, a healing ulcer is exposed. There are generally deeper deposits requiring a repetition of the cauterizing, so that from four to possibly twelve applications may have to be spread over as many months.

In our estimation, the galvanocautery is to be preferred in all cases where rest and hygiene do not promise a spontaneous cure. A very fine-pointed electrode brought to a white heat should be thrust firmly through the diseased area until its arrest shows that healthy tissue has been reached. Several cauterizations are made at one sitting, which should be repeated every ten to twenty days, and continued until complete healing occurs. Swabbing the lesion with galac-

tenzyme bouillon may be tried tentatively. Under any circumstances, we would be inclined to push nuclein, calx iodata, and the arsenates.

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QUERY 6037.—"Wanted, a 'Specific' for Leucorrhea." S. S. P., South Carolina, in his letter tells us that he is a believer in "specifics" and is all the time trying to find such—if possible. What he wants now is, a "positive cure for leucorrhea." His experience during some thirty-odd years in the medical field is that few women go through life without at some time or other suffering from leucorrhea, and now he asks: "Why is it? What is it?" Then goes on to say:

"I always considered this a condition depending upon one or more causes. Of course, the thing to do is, to remove the cause, whereupon the discharge ceases; unfortunately, many times this is not so easily done. Now, then, comes the rub: What is the best thing to do to stop this very disagreeable discharge? My father was a physician, and he used to tell of at one time reading in a book about how to cure spavin in a horse, which ran about like this: 'Give so and so, and, if that doesn't cure, try this and that; if that is no good, try something else; then, if that fails, swap the horse off.' Unfortunately, in our case, we don't want to 'swap off' the lady patients, for there is where our bread (to say nothing about the butter) comes from. We want the patient to stick to us. What we are after is, to do something to *cure* these women, rid them of their whites."

"Almost every doctor, if he has been in practice long enough, has some pet remedy that has given him good results in many cases. Give me as near a specific as you can, good editor, and do not tell me to try this thing and that thing, clear down the whole list of reputed cures. I want something I can depend upon every time. 'A hard thing to do,' do you say? Yes, indeed, it is a difficult proposition—and that is just why I want help from you or anyone else who knows.

"Thus, for instance, there is a vaginal leucorrhea and a uterine leucorrhea. Does any doctor really know what either of these conditions is? Does the doctor know for certain whether in a given case the trouble is a diseased condition of the mucous linings of the tract or whether it rather represents an effort of nature to try to get rid, through these membranes, of, say, some morbid constituent of the blood? What, I ask, is this discharge, anyway? Is it a profusion of leukocytes? If so, where did they come from? What is the answer?"

Verily, doctor, you request the impossible! With "thirty years' experience in the medical field," you certainly must know that there could be no such thing as a "specific" or a "positive cure" for leucorrhea.

The term "leucorrhea" signifies merely a flow of a whitish substance. Even certain remedial agents that are effective in one case of uncomplicated "whites" (true leucorrhea) might fail entirely in another. Here, as elsewhere, we must discover and then correct the causative condition, the source of the discharge. If this is true for simple, uncomplicated leucorrhea of young and more or less chlorotic women, how could we possibly have a "specific" for the "leucorrhea" of endometritis, cervicitis, vaginitis, and that host of other offending conditions? You will find this matter fairly well covered in Dr. C. H. Candler's articles that appeared in CLINICAL MEDICINE of September, 1911 to May, 1912, under the general heading of "The General Practitioner as a Gynecologist."

In the majority of cases of leucorrhea, local and systemic treatment must be instituted conjointly. Never forget to ascertain whether the discharge is acid, alkaline or neutral. If it is extremely acid, alkaline solutions should be employed. In leucorrhea of vaginal or cervical origin, copious hot antiseptic and astringent douches and the subsequent application of a suspension of Bulgarian-bacillus culture (galactenzyme) or gauze saturated with galactenzyme bouillon, will prove helpful. If you will consult the more recent works on gynecology, for instance, Ashton's "Practice of Gynecology" or Bandler's "Medical Gynecology," you will secure all the information we could give you; however, you will not find the term "leucorrhea" in the indexes. In fact, no modern writer offers a "treatment for leucorrhea." Consequently, to look for a "specific," is, to search for the philosopher's stone—which "is not," and never will be.

If you care to send a specimen of discharge, and submit a clear report upon the vaginal, uterine, cervical, as well as the general physical conditions in any particularly rebellious case (with, preferably, a specimen of urine—4 ounces from the 24-hour output, stating the total quantity voided), we shall be pleased to aid you to the extent of our ability.

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QUERY 6038.—"Death Following Abortifacients." D., Tennessee, attended a young

woman who was suffering from what he believed to be mercurial poisoning, pronounced symptoms of which, except fetor of breath and bloody stools, she displayed, notably ulceration of the gums, cheeks, tonsils, and palate, together with considerable sloughing and hemorrhage from them. Her stomach and intestines were inflamed and the abdomen enormously swollen. She was three months pregnant and was trying to rid herself without the knowledge of her family. She died at the expiration of two weeks. Before dying she confessed and said she had been taking sulphur and buttermilk for several days. After her death we found that she also had been drinking a decoction of mistletoe for three or four days.

"What effect," D. asks, "would the sulphur and buttermilk and the mistletoe have produced? Was there justification for pronouncing the condition mercurial poisoning when there was no knowledge of her having taken the drug? The stomach was examined and no trace of mercury found, but the eroded and congested condition of the mucosa showed that she had taken some irritant poison."

We regret to say that it is impossible to extend you any really helpful assistance in view of our limited information about the general conditions. However, sulphur and buttermilk alone would not cause poisoning; the combination certainly could not produce ulceration of the mucosa of the mouth. At most, large quantities of gas might be generated and cause abdominal distention, and undoubtedly it would act as a laxative.

However, a strong decoction of mistletoe would prove harmful. The action of this epiphyte has not been closely studied, and opinions vary, some claiming it to be a reliable oxytocic, while others deny this. So as to its property as a strong nervine. While it is not an abortifacient it is an irritant poison and diaphoretic, full doses causing vomiting, catharsis, tenesmus, prostration, and sometimes bloody stools; and, in lethal dosage, coma and convulsions ending in death. Preparations of the fresh plant are most active.

As an oxytocic, Ellingwood and other writers believe a good preparation of mistletoe to be more effective and safer in some respects than ergot. French clinicians recommend guipsin, the active principle of mistletoe, in arteriosclerosis, nephritis, and other conditions where there is circulatory hypertension.

It is more than possible that the edematous and congested condition of the enteric and gastric mucosa of your patient was caused by the mistletoe. As we understand it, however, this drug had been used for only three or four days, whereas ulceration of gums, cheeks, tonsils, and palate had been present for some time. On the whole, it is reasonable to suppose that some other irritant poison had been taken by the young woman at an earlier period. A girl in her condition ready to swallow sulphur and buttermilk and decoctions of mistletoe to get rid of the product of conception would take anything she might be told would produce abortion. While she confessed to the use of the mistletoe, she probably omitted to mention the use of the drug which produced the symptoms leading you to treat her for mercurialism.

Had mercury in any form been taken in quantity, traces unquestionably would have been discovered in the viscera. From what you tell us, we surmise that the young woman's condition was not known until shortly before she died. What was found—had there been any attempt at instrumental interference?

As to the diagnosis: The mere fact that ulceration of gums, buccal mucosa, tonsils, and palate. existed would not justify a physician in making a positive diagnosis of mercurial poisoning; still, the treatment usually instituted for such condition would not prove injurious to the individual.

QUERY 6039.—"Intravesical Hemorrhage of Obscure Origin." H. S., Idaho, describes what he considers "one of the most difficult problems a physician ever had to solve," and the patient's recovery "a miracle." The patient was an old veterinary surgeon who tired of the work and, so, tried prospecting and accepted any kind of farm work offering. One day in October, the correspondent was called out to a ranch and there "found this man in much pain, with abdomen greatly distended, and unable to pass urine. This was 3 o'clock in the afternoon. It developed that he had been purging constantly since about 8:30 that morning, and "he had strained so hard that he began to suffer in his abdomen and his water stopped," as he put it. The doctor continues:

"Examination revealed an enlarged bladder. A catheter could not be passed, and, not liking his quarters, I at once moved the man to my home, summoned a nurse and set to work. It was impossible to get a rubber catheter into the bladder, and I had to resort to a metal one. After thirty minutes' work, I succeeded and, to my surprise, the catheter

plugged up with blood clots, which I had to draw out with a wire. When I got a steady flow, there came exactly one-half gallon of blood from the bladder; and then the pain ceased. However, the bladder would fill up again, when the suffering was awful. The odor of this blood was horrid. The patient's temperature gradually rose to 102° up to 106° F., and at times even higher. The hemorrhage continued, and the patient gradually got worse.

"We catheterized three times in each twenty-four hours, and always with the same result; namely, an issue of clotted blood of a dark color. On the third day, there began to pass particles of the prostate gland, some as long as one-half inch long and of a thickness just to pass through the catheter. This continued for about five days; at every catheterization we would get pieces of the gland.

"On the fifteenth day, conditions were worse, the bladder was filling up much quicker. The man was in a bad state and I looked for every minute to be his last; he, too, prayed to die. I called in consultation two other doctors, who were friends of his. Together we considered carefully every symptom and discussed the advisability of operating, but decided that the patient could not stand the anesthetic. After some debate, the consultants from the city decided nothing more could be done, that it was a 'case of die'; and I really thought so myself. Still, after the two confréres had left, I set to work again, with a view to check the flow of blood.

"What I did was, to give hypodermic injections of atropine and ergot, one every two hours. In addition, I administered nitroglycerin, digitalis, and strychnine, at intervals, to support the heart. To my supreme delight, when the man was catheterized at 12 midnight, there came no blood, only the urine was barely tinged with it. I felt immensely relieved, and something told me I had the situation under control. The nurse remarked: 'Doctor, he will get well, I notice a change in his whole condition.' We remained; we were looking, every minute, for the bladder to give away under the blood pressure and the end to come quickly. But the nurse and I myself stuck to that sick man night and day, and there was not a change we did not see. He recovered.

"I diagnosed the condition as follows: A dormant carcinomatous condition of the prostate gland; the straining at stool broke this down and in so doing a blood-vessel was ruptured at the neck of the bladder or in the prostate gland. For ten days we got nothing but blood, besides a very small amount of urine, which was clear as water. The blood and the urine did not mix during this period.

"My treatment was as follows: I gave strong stimulants, and atropine and ergot, hypodermically, every four to five hours, to control the hemorrhage; and on the tenth day I got results. The bladder was irrigated twice daily with a boric-acid solution. Aconite in small doses was given to control the fever, which on the fifth day went up to 106° F. As the man improved, I put the hypodermics further apart and cut down the stimulants. Under this treatment and careful nursing, he grew better right along; never had another hemorrhage. On the twenty-seventh day, he began urinating of his own accord, and we laid the catheter aside. Up to this time, he had had no power to urinate at all; but it came back nicely, and on the thirty-third day I discharged him.

"The man was as sound and well as he ever had been, and in ten days he gained 4 pounds. I had a letter from him several days ago, and he tells me he is feeling fine, passing his water normally, and weighs 165 pounds. It is without a doubt the most remarkable case I ever saw or treated; there were times when I would not have given one cent for his life, and the two doctors from town declared positively he would not last twenty-four hours.

"There are two things I am unable to explain or to understand; and if the editor will try to explain them I shall feel thankful to him. First, why did the blood and the urine not mix? Every time we catheterized the blood would come first, then the urine as clear as a bell. Second. Why did this hemorrhage cease so quickly upon the atropine treatment?"

In a later communication H. S., says, "The question arises, was our diagnosis right?

I kept several pieces in alcohol for a few months, but the bottle was overturned, the alcohol leaked out and the contents dried up. I still have the pieces dried up and inclose same herewith.

The pathologist reports, "What little examination we can make of the dry material sent in shows phosphatic crystals, evidently from an alkaline urine and some shreds of dried and shriveled connective tissue that probably was covered with epithelium. We believe this to be a case, as you state, of papilloma (vesical)."

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Difficulties of the Old Doctor

THESE swift times are pretty hard on the aging in every walk of life, but to none comes the stress as it does to the old-fashioned doctor. Always this guardian of the people's health has had his troubles and his competition to meet. Never has there been the day when he could look upon his practice as does the farmer on his acres, and feel that he holds its ownership secure. Previous to this, however, he has been contending with his equals, and the competition has been one in which he had a fair chance to hold his own. It is different now.

Comes the traveling doctor and the advertising doctor who are specially skilled in the art of getting on the good side of folks and wheedling their money away; the quack is also nowadays very often a really skilled practician, well up in latest and improved methods, up to date, far better versed in his profession than many a regular.

Comes the state law, which tells the doctor he has to remain in his own state or quit practice; for, the old doctor can not hope to pass the present-day examining boards. No matter whether his wife sickens and climate alone can save her, or his old town dies out and others rise where doctors are needed; he must stay where he is or give up his profession.

But the competition that cuts closest is that from his own fellows. The surgeon cuts huge slices from his income; the specialist and the hospital attract all those of his patients that are at all able to pay; and the modern doctors emerging from the splendidly equipped schools of today are so far ahead of him in professional acquirements that the old practitioner is a back number.

This last is the principal cause of the old doctor's difficulties. He has been guessing his way through life. Guessing what is the matter with the patient; guessing what may cure him; guessing how much calomel, quinine, and morphine he is pouring out into powders; guessing which of the half dozen drugs given has, maybe, helped; guessing that the old stuff in his old bottles may still possess strength enough; guessing that the patient is better and that maybe what medicine he gave did the good; guessing, guessing. And then, in the end, guessing that enough cash will come in to meet the bills and that he will collect enough to pay the taxes.

He is a great guesser, is this good, old-fashioned kind-hearted doctor; but, what does he *know?* Aye, there's the rub!

Comes the new doctor, fresh from college, flushed with his triumph at the examination for license. He is well versed in the new

medical science that is based upon science—not upon mere guessing. The doctor of the old school may guess within half a degree what is the patient's temperature, but the youngster uses his thermometer, and knows exactly. Grandpa guesses that there is a touch of pneumonia here, or maybe a sketch of typhoid, or perhaps a lurking malaria. The boy examines and finds no pneumonic râles; the urine shows no malarial pigment, the blood, no plasmodia; the feces display a brood of amebas; and so the cause of the disease is demonstrated with mathematic certainty.

Diphtheria attacks are not left to kindly nature to thwart, but are scotched with antitoxin; and the rest of the family are protected thereby. Those who are exposed to typhoid infection receive the prophylactic inoculation, and the malady does not run through the family or through the entire community. No case of sickness which is in any way obscure is guessed at, but the resources of the clinical laboratory are utilized until certainty of diagnosis is secured.

For all that, I do not see why the old doctor should give up and efface himself merely because he labors under difficulties. What are difficulties but things to be met and conquered? One grown gray in service has many advantages which the others lack. He has experience; he knows the constitution, the habits, the tendencies, the histories of his patients; and these things furnish much upon which to base a conclusion or a diagnosis. He knows the nature of the locality and the maladies common to it. The while the younger man is puzzling with his reagents and microscope, the elder one may recognize that there has been an illicit supply of whisky brought in.

The older man can sit down and realize wherein are his own deficiencies, and take steps to amend them. He may read newer books than the quarter-century-old texts in his library since his student-days. He may secure late and scientific journals and read them. He has a knowledge of drugs that scarcely is being taught in the colleges nowadays, and he can improve his stock by better and surer remedies. He need not run after every fad and novelty, but he can trade his effete powders and decomposed fluids for remedies that may be depended upon to do what they are expected to do. There are many things he can do—if he will.

I have little use for the man who is in difficulties and sits down for competitors to run over him. Such men ought to be run over. They cumber the earth and are in the way, hindering the progress of live men. I wish I had a real sharp stick with which I could poke them into exerting themselves.

There is no room in this busy world of today for incompetence. The fittest must survive—and, if you are the unfit, why let sick people suffer that you may make a living.

Be the fittest.

How can we best show our patriotism in this time of international anxiety? While thoughtful for and anxious to help those in distress in Europe, let us remember that our first duty is to those at home—to keep the wheels of American industry turning and to keep American labor employed. Never was our duty more clear to buy generously of American-made goods; to invest in American securities and American lands; and to clothe ourselves with American-grown cotton and wool. Don't hoard your money. Buy now—today!

THE TRUE INWARDNESS OF MEDICAL-CHARITY ABUSE

Two general forms of medical charity, so called, prevail among us, namely, the dispensary clinic and the hospital ward. Needless to say, there is no intention on our part to dispute or belittle the tremendous boon which both of these institutions are to the poor and unfortunate. They put within their reach a benefit which otherwise they could not hope to attain except through the occasional generosity of an individual practitioner. That, however, is not the question. The point for inquiry is, how far may these institutions be regarded as genuine medical charities, that is, the free, unrequited bestowment of medical service, for the sheer love of humanity, such as an individual will make.

The mere fact that these are organized institutions is a *prima facie* indication that they are—and ought to be—something far different. For, one of the prime purposes of an organized charity, so called, is, to eliminate the pauper element as far as possible, and so to adjust the economic relations of those who minister and those who are ministered to, that each as far as possible may give and take.

In the case of the dispensary clinic, this reciprocal feature is almost wholly based upon the clinical and educative value of the patient to the medical school to which the clinic is tributary, and to whose evolution it has contributed to a very large extent. Medical schools, in their turn, are tributary to the renown, and thereby to the income, of the members of the faculty, who, in the vast majority of instances, give their teaching services to the college for nothing, sheerly in

consideration of the returns they may get in the way of prestige and advertisement.

In the case of the hospital-ward, the same things are substantially true. There are, to be sure, very few out and out charity hospitals outside of the county and municipal institutions. Even the ward patients in most hospitals are expected (and rightly so) to pay what they can afford for their accommodations. But, so far as their medical attendance is concerned, they requite it by their educative and advertising value to the members of the staff. And, if a college is tributary to the fame and pocketbook of the faculty, to how much greater a degree is this true of a hospital and its staff.

The fact of the matter is, charity hospitals are rarely the creation of medical men at all, but either of some philanthropic organization or of the state; and to suppose that the break-neck rush of physicians and surgeons to get on the staff of such institutions is the expression of an overweening enthusiasm for humanity is simply absurd. These institutions feed the experience and fame, and so indirectly the purse, of the specialist who is fortunate enough to own a membership; that is the plain truth of the matter. Nor is there any call for apology that it should be so. In itself, there is nothing dishonorable or out of the way in the situation. It establishes a more or less equitable *quid pro quo* between the indigent patient and the doctor, and is thus far better, from a sociological standpoint, than pure charity.

But, if it be overdone, what then? Who suffers? Not the patient, even from a moral viewpoint; for he feels, and rightly feels, that he is requiting the service he receives. Not the specialist, for, up to a certain point, the more of such work he does, the more fame, experience, and income he acquires; and he can easily shut it off when it passes that point.

It is the general practitioner, who has no hospital connection, whose private practice is robbed to just the extent that the institutional specialist's clinic is fed by those who are able to pay in money for their service, and who experiences no compensating gain for this deprivation—he it is that suffers from the "abuse" of medical charity and is pauperized by the habit.

Who is to blame? The public may well be left out of this question. Under the circumstances, one can scarcely blame the public for availing itself of a more or less ostensible reciprocal arrangement in which it is cordially invited to participate; and, in any case, the public can scarcely be expected to look out for the welfare of the medical man.

The fault, then, must be divided between the institutional specialist—with whom there is a constant temptation to play the game for all it is worth, educationally, socially, and financially—and the general practitioner, who foolishly helps the evil along by unnecessarily feeding the strongly tempted weakness of the specialist.

And the remedy? In this aspect of the matter, it is greatly to be feared that one must count out both the public and the specialist. Self-interest, even in the medical profession, is a powerful element to reckon with, and, as a rule, must be opposed by self-interest.

The remedy lies with the general practitioner himself. He must learn to keep for himself what he has been so recklessly and indiscriminately sending to the institutional specialist. In short, he must disabuse himself of the fetish of unnecessary specialism, which has dominated him for so long.

We understand that an organized movement already is on foot for the furtherance of such a purpose; to investigate and readjust the economic relations of the physician to the community and to the institution, and to discuss the entire subject of ethics in its relations to modern practice.

If, as we understand, the objects of this organization are wholly constructive, and in no sense destructive, we are of opinion that it will fill a great need. We also believe that the time is ripe for the effective carrying out of these objects. However, so far as this particular question of charity abuse is concerned, we venture the admonition that the elements of abuse will be found within the profession itself rather than with the public at large.

THE HARRISON BILL—AT LAST!

The members of the conference committee, appointed by the Senate and the House of Representatives, have agreed upon a final form for the Harrison antinarcotic bill (H. R. 6282). The points of difference between the Senate and House bills were adjusted by compromise. As it finally stands, all physicians, whether they dispense or prescribe, will be required to register and take out licenses from the United States Government. For this license a fee of $1.00 will be charged. Also, physicians will be required to keep records of narcotic drugs dispensed, *providing they are not personally in attendance upon the patient to whom the medicine is to be*

given. In other words, records must be carefully kept by every physician, dentist or veterinarian of all narcotics sent to patients by mail or by messenger.

While this narcotic law is not ideal, and probably will not be entirely satisfactory either to physician or druggist, it is a laudable effort to crush out a great evil, and as such we hope that it will be warmly supported by every practitioner and pharmacist. The fight over it has been a warm one, and at times acrimonious, but the results seem to justify all our efforts. Now let doctors and druggists get together, stop their scrapping, and see that the law is enforced.

The law goes into effect next March. Full details will appear in later issues of this journal.

You may be sure that some men, even among those who have chosen the task of pruning their fellow creatures, grow more and more thoughtful and truly compassionate in the midst of their cruel experience. They become less nervous, but more sympathetic. They have a truer sensibility for others' pain, the more they study pain and disease in the light of science.

—Oliver Wendell Holmes.

THOROUGHNESS

I have already spoken of the thoroughgoing way in which the German nation has prosecuted its own commercial interests, appealing to the patriotic sentiment of every individual citizen to contribute his share toward the national prosperity and to promote, even though it be at a sacrifice, the advancement of German supremacy.

This same thoroughness characterizes the German habit of thought and rule of conduct in every phase of life and industry and is well worthy of emulation by us, here, in the United States. Indeed, if I should be asked to say what quality, in my opinion, was peculiarly distinctive of the German character, I should say that it is the quality of thoroughness. Then if, on the other hand, I should be asked what quality, in my judgment, is most needed in the American makeup, I unhesitatingly should reply, This same quality of thoroughness.

Brilliance we have, without doubt; adaptiveness, beyond all other peoples; skill and daring and capacity for achievement, in amazing degree; but we lack, as a race and as individuals, that patient, painstaking, scrupulous regard for thoroughness, that always-preparedness which, above all else, marks the German character.

I am thinking, just now, especially of medical men and medical work, of course. When one considers the achievements, and the resources, and the facilities, and the possibilities which the medical science of this country has put at the disposal of the physician; all the incentives to thoroughness and the means to be thorough; and then looks around him and observes on every hand the evidences in medical practice of not merely *un*thoroughness, but of positive carelessness and slovenliness and happy-go-lucky-ness, it really makes one disheartened, if not pessimistic.

In spite of the many agencies now available for accurate diagnosis, for example, how many practitioners of medicine, yes, or even institutions of medicine, are availing themselves of them and conscientiously utilizing them? How many, rather, are still contenting themselves with the same old-fashioned, inadequate methods of their grandfathers, as though they did not live in the twentieth century at all? Nay, they are not nearly so thorough as their grandfathers were, for they accept the innovations of modern diagnostics without putting them into practice. At all events, in the face of all the means of thoroughness, they are content to be superficial and slipshod.

Only last week a capable and progressive young physician, from a large and (in most respects) wideawake city of the West, called at this office and told us that, with but one or two exceptions, not a hospital in his city was properly equipped with adequate facilities for doing even the most ordinary kind of clinical diagnostic work.

Indeed, this doctor's report upon and description of the conditions named showed a paucity of diagnostic preparedness and a carelessness of diagnostic detail that would be ludicrous if it were not so serious. He told how at one time he was assisting at a surgical operation, performed in one of the leading hospitals of that city by one of the prominent surgeons there, when pus was seen to issue from the wound. "That looks like pus," remarked the surgeon. "It certainly does;" replied our young friend; "how is the leukocytosis?" "I don't know," said the surgeon, "no blood-count was made."

What sort of thoroughness is this, in the twentieth century, in a supposedly up to date American city? Yet, I fear it is but typical of *average* conditions. The medical profession is *not*—there is no use blinking the truth—it is *not* living up to the possibilities and obligations which the achievements of its own scientific workers have laid upon it.

The average American practitioner is not doing as thorough work as he might. It is not that he lacks the skill, or the means, or even, in a certain way, the will. It is just that habit of making shortcuts and of getting there quickly that is the curse of the American temperament. What we need, more than anything else, is, to cultivate the habit of thoroughness which characterizes our German neighbor.

The fowler's shot resounds through pleasant air,
The maples have put on their red and gold,
The purple haze envelops wood and wold
And makes the homeliest things look soft and fair.
The corn stands in the shock for winter's food,
The cows graze lazily along the stream,
The distant mountains now much nearer seem
Than when the summer heats did o'er them brood.
The growing colt frisks gayly through the field,
Nor thinks of toil in store for him and me.
A sluggish feeling calms our energy,
And makes the mind to dreamy fancies yield.
Over the well-won trophied autumn's shield
The Indian summer spreads its tapestry.

—Edward S. Creamer.

FEDERAL LICENSURE: HOW TO BRING IT ABOUT

For years, physicians in all parts of the country have been writing to us and to other medical editors about the difficulties involved in making a change of residence from one state to another. As the laws of our country now stand, the doctor who desires to remove to another state, on account of failing health, to educate his children, or for any other reason, is required to take a severe and exhaustive examination in the different medical branches.

The average physician knows very well that he cannot pass these examinations without some months' preparation, nor can he understand why it is necessary that he should do so. If he is qualified to practice medicine in one state, he should be equally qualified to practice in another. If he can satisfactorily serve the sick in Massachusetts, he ought to be able to do the same in Missouri or California.

"Is there any justice in demanding that I shall give up my life work simply because I am obliged to remove to another state?" This is a question which is constantly bobbing up. Practically every fair-minded man recognizes the injustice which is being done to thousands of practitioners under our present medical-practice laws.

Is there no remedy? Until recently, we are free to confess, we have heard of none. The plans for reciprocity inaugurated by the state boards have proven utterly inadequate. Unfortunately, those portions of our country which seem most desirable for men and women of advancing years or in feeble health are most anxious to exclude competing physicians, and in these sections reciprocity is not popular. Nevertheless, there are a few men in this country who do believe that some constitutional method of reciprocity between the licensing boards of different states is a possibility.

It is rather significant that within a month or two two journals have submitted plans for federal medical licensure. One of these, *The Medical Council*, advocates the establishment of a volunteer sanitary service as a department of the United States Public Health Service. Appointment to this service shall be by examination only, and every physician who succeeds in passing the examination successfully will become a "federal sanitary inspector," and, as such, a medical officer of the United States Government.

Most of our states provide that medical officers of the Army, Navy, and Public Health Service shall be admitted to registration for practice without examination. Therefore, it is believed that every person who succeeded in passing the federal examination could legally move from one state to the other and continue as a practitioner without taking the local examination.

The other plan was suggested by the editor of *The Journal of the American Medical Association*. It is similar to the preceding one, but it makes the basis of licensure entrance into the Medical Reserve Corps of the United States Army. Officers of this service, under most state laws, are admitted to practice without state examination. This plan is closely analogous to that presented by Doctor Blair of *The Medical Council*.

Whether it is possible to work out either of these plans in such a way as to make them acceptable to the federal government and at the same time acceptable to the several states, only free and full discussion can determine. Either plan seems to us a good one, and we can see no reason why both should not be workable.

The greatest objection, however, is likely to come from the examining boards of a number of states which have heretofore frankly been anxious to prevent an influx of practitioners. Take California, for instance: This state does not want any more "one-lung" doctors. Indeed, here physicians believe there are too many medical practitioners in California already, and it may be doubted

whether they would consent to surrender the police-power of the state as regards medical licensure under any condition whatever.

In the final analysis, the successful working of this plan, either in the form presented by Doctor Blair or Doctor Simmons, will depend upon the assent of the various states. What their attitude will be, we have as yet no means of knowing.

We are intensely interested in this suggestion and hope that it will be freely discussed from every angle. CLINICAL MEDICINE is anxious to supplement every reasonable effort toward promoting reciprocity of licensure, or of federal licensure, if such can be secured. We sincerely hope that everyone of our readers will give this subject earnest consideration, and we shall be glad to open our columns to anyone who may desire to discuss it.

What do *you* think, doctor, of the plans proposed? Can you improve upon them? Can you see any reason why they can not be made effective? And which one is best?

If you cannot secure your accustomed foreign-made or foreign-grown remedies, why not take this occasion to study American chemicals and American medicinal plants and their derivatives? Our Eclectic brethren have sounded the note. Can we not all join in the swelling chorus and make it a hymn of praise and salvation?

A SLOGAN FOR AMERICANS

We must "hand it to the Germans," as the boy in the street says, for at least one thing, and that is the vigorous, persistent way in which they play up their patriotic spirit in the commercial and economic phases of their national life; which, after all, are the channels through which patriotism is able to do most genuine good for one's country.

We Americans have been in the habit of flattering ourselves that we were the most patriotic people on earth; but, as we begin to know, through the publicity given it by the present war, the inside life of Germany, we declare it makes us Americans look like a lot of cheap shouters and noisemongers, who make very little serious effort and still less real sacrifice for the welfare of our nation.

Forbes, in *The Chicago American*, cites a sort of business decalog which, he asserts, has been circulating through Germany, broadcast, for several years, distributed to every merchant, hanging in every home, and graven into every heart in the Fatherland. This code consists of ten trade commandments, the gist of which is summed up, at the end, into three or four cardinal principles of industrial patriotism, as follows:

Promote German Industry.
Keep Employed German Labor.
Make Use of German Capital.
Distribute Your German Money at Home.

This is but illustrative of the tireless, wholehearted way in which the German nation "boosts its own game"; and it is this spirit and method that have built a commercial empire out of a few straggling states within the comparatively short period of half a century.

Well, presumably the lesson has come home to us; and it has been driven home at a time and under circumstances which, of all times and circumstances, offer the greatest opportunity to profit by it. Markets of the world that have hitherto been supplied by the now warring nations stand begging for goods. Our own people, deprived of the conveniences, even of the necessities, of life which they were accustomed to receive from Europe, are looking eagerly for other sources of supply. We are enormous consumers as well as enormous producers.

Plainly, the patriotic duty of every citizen of this country is, to take a leaf out of Germany's book and boost the game of the United States.

To quote the words of George Pope, president of the National Association of American Manufacturers:

"In the love of country, repeat, and continually repeat, not to yourselves alone but to the world, 'Made in the United States,' until all the world has heard the slogan; and then repeat it until the world shall never forget." And in the very next breath Mr. Pope pertinently reminds us that "all the world includes ourselves, so take this slogan home and increase our home markets by consuming more articles of home production."

Let no man feel that his individual purchases do not matter. The nation is composed of individuals. Not only in his home, as an ordinary citizen, but in his professional relations, the doctor is intimately and vitally concerned in this movement.

Of all the classes of goods to be influenced by the European war, drugs and surgical instruments are among the most affected. Some of these supplies, of course, we have hitherto been unable, or have thought that we were unable, to produce in this country as advantageously as they could be produced in Germany and the other European countries. But it must be admitted that a great deal of

our dependence upon the other side for medicines and instruments has been owing to a foolish fetish of the "Made in Germany" label, which might just as well have been a wholesome enthusiasm for the "Made in the United States" sentiment.

Do not misunderstand us. We advise no man to discontinue the use of foreign-made goods when those goods are better than what we can produce here. If you need German chemicals to cure your patients, use German chemicals. There are good ones advertised in this very number. We need not conspire against the trade of brave little Holland, or sunny Italy, or any other country, in seeking to keep the wheels turning in our own factories. It is the pressing need for prosperity at home, in my state and your state, my town and your town, that we have in mind. Today the great problem for America and Americans is how best to help our own industries, crippled by a foreign war

NOW, if ever, is the time for every individual citizen of the land to rally to the banner of American prosperity. Let us coin our high-sounding patriotism into currency of the realm, and cash it in. We have been told, over and over again, by some of our friends across the water, and in not too complimentary fashion, that the United States stood for the age and the spirit of commercialism.

All right; we'll accept the characterization. We see what the traditions and the patriotism of the old world have led to. Now let us demonstrate to ourselves and to the world that it is possible, not only to be commercial and patriotic at the same time, but to make our commercialism the vehicle for the exercise of our patriotism.

Doctor, every man Jack of you, the game is up to you. On you, individually, lies the responsibility of making out of the present crisis either a slough of depression and industrial paralysis or a highwater peak of success and prosperity. Do not expect to be swept to prosperity on some overwhelming wave of general sentiment. You must do your own personal part to bring this end about.

Take the industrial decalog and apply it consistently to your own individual life and conduct. Promote American industry; employ American labor; use American capital; distribute American money at home. Buy American food and clothes, American drugs, American supplies. Our harvests are abundant; our factories and our workers are ready and eager for the work; our finances are sound. "It is we," cried Cicero to the Roman senate in a national crisis, "we—the consuls—who are wanting." Let us be found wanting no longer.

I let Nature work, supposing her to be sufficiently armed with teeth and claws to defend herself from the assaults of infirmity, and to uphold that contexture, the dissolution of which she flies and abhors. I am afraid, lest, instead of assisting her when close grappled and struggling with disease, I should assist her adversary, and burden her still more with work to do.

—Montaigne.

ANOTHER SIDE OF THE FEE-DIVISION QUESTION

That there are two sides to the question of fee division, and that the "other side" is not confined altogether to the ranks of the irregulars and the insurgents, is evidenced by the recent publication of a pamphlet on the subject under the joint auspices of the Grant County Medical Society of Indiana and the Eleventh Indiana Councilor District Medical Association.

This little brochure embodies a paper on "Fee Division" read by Dr. A. A. Hamilton, of Marion, Indiana, at the January, 1914, meeting of the Grant County Medical Society; and, being printed and distributed with the unanimous sanction and endorsement of that body and of the Councilor District Association, it may be regarded as the official utterance of organized medicine in that part of that state.

Doctor Hamilton opens his discussion of the subject with a short series of decidedly pertinent questions, two of which, as it seems to us, bite into his side of the controversy with most incisive effect.

One of these questions formulated asks, "Against whom is this warfare being directed?" the second inquires, "Who is doing the complaining?" Doctor Hamilton's replies, while not quite so terse, are equally pointed and direct.

It is "a battle in which the few are arrayed against the many," the Doctor declares, "because the warfare is directed against a large body of special workers, as well as against all generalists, in a concerted effort to force both to accede to the demands of these self-appointed leaders." In short, he avers that the campaign in denunciation of fee division is waged altogether against the great mass of the profession, and in opposition to the consensus of opinion, and that the complainant is the exceptional specialist who is greedy to receive and retain the entire emolument in every operative case.

We have no desire to enter into the controversy ourselves; far less do we wish to appear as unqualifiedly endorsing the practice of fee splitting. Nevertheless, it is worth while to bear in mind that even to this question there are two reasonable sides; and that the advocacy of fee division is not, as we have said, restricted to the outsider, but is to be found within the ranks of organized medicine itself. Indeed, we are of opinion that it is much more prevalent than is commonly realized; but, of course, it does not find its way into the pages of the state journals as does the hostile attitude.

Moreover, we will go with the author of this little pamphlet to the extent of expressing our conviction, in a general way, that whatever of mischief has entered into the situation has its cause in the exaggerated status and the domineering attitude of the surgeon, who has come to look upon the practitioner (and the practitioner has almost come to look upon himself) as a mere caterer to his specialty. We are persuaded that it is out of this perverted state of affairs that all the contradictions of surgical consultation, including the evils of fee splitting, have grown.

Any movement that seeks, honestly and sincerely, a genuine remedy for the evil, will have to look further and deeper than to this or that surface aspect of the matter. It will have to aim at a rehabilitation of the proper relationship between the general practitioner and the surgeon, and restore the former to his rightful and logical place; to observe within the profession, and let it be known to the public, the supremacy of the physician in every case that he undertakes and the tributary part played by the expert surgeon.

The expert surgeon stands, in relation to a case into which he is called by the physician, in precisely the same position as does a special pleader toward a suit into which he is called by a lawyer; and there is no reason why the doctor should not follow the course followed by the lawyer under such circumstances.

The lawyer plays his case to win. If, in order to win, it be necessary to call in a special pleader, he calls him in, making the best terms he can with him, and charging the expert's fee as a part of his own bill. There is no talk of fee splitting. There is no need for such a thing. The case is the attorney's, not that of the expert. It is to the interest of both himself and his client to win it. He will get the best expert assistance he and his client can afford—often, indeed, sacrificing a little of his own hard-earned fee to secure the best. But he never relinquishes his own direct responsibility to the client or his own mastery of the case.

It seems to us that a similar mode of procedure might, and indeed should, obtain in the matter of the physician and the expert surgeon.

But this never can, and it never will, obtain as long as the surgeon continues to dominate the situation as he has during the past twenty years. Happily, however, there are unmistakable signs that the general practitioner is beginning to reassert himself, determined to come into his own again. To us, this is the most notable significance of the pamphlet issued by the Indiana organizations—even greater than the evidence which it furnishes of another side to this question of fee division, although that in itself is well worthy of consideration.

Not in recent years has there been such a triumph for the cause for which we are fighting—for a wider recognition of the advantages of the plant principles as compared with the galenic plant preparations—as in the demonstration of the therapeutic possibilities of emetine. This alkaloid is to ipecac what quinine is to cinchona bark. We now know that it will do things which we never dreamed ipecac could do. Are you studying it?

THE CORRECTION OF FLAT FOOT

As regards flat foot, it is highly important for us to learn, not simply how to cure flat foot already fully developed (a condition readily recognized by means of starch-iodine or printers'-ink impressions upon paper), but to be sure to recognize the very first beginnings of this lesion, in order correctly to diagnose in time various static troubles resulting from altered foot conformation, but which very frequently express themselves primarily in distant parts of the body, especially in the knee, hip, and sacrum.

Lorenz says correctly: Many an offhandedly diagnosed gout of the ankles (the pet diagnosis of doctors), many an alleged ischias and meralgia might promptly and permanently be cured—without subjecting the victim to dietetic torturing—if the idea were to become more generally accepted that not merely high-grade flat foot (such as already betrays itself in the shoe worn) is a proper subject of treatment, but that also the weak, yielding, insufficient foot, that flattens out under the weight of the body, constitutes an unceasing source of pain and is a thankful object of orthopedic interference and calls for early attention.

Particularly important is the timely recognition of pes planus adolescentium, which oc-

curs in the same period of puberty as genu valgum and coxa vara, and which only too often is treated for months as rheumatism, until irreparable fixation of the bone deformities has resulted.

If we inquire, the author continues, as to the causes of the now so frequently observed trouble of flat foot, we are compelled to accuse —before and above everything else—the incorrect shape of our present-day shoes. If we draw the outline of the sole of such a shoe over the color impression of the foot, it generally will be seen that the incorrect cut of the anterior inner sole edge forces the fore part of the foot into abduction. To be of correct form, however, the sole of the shoe should be shaped with reference to the adduction of the fore part of the foot. That it is a fact that the American shoe-last conforms most nearly to this norm, Doctor Lorenz freely acknowledges.

THE AMERICAN SANITARIUM'S OPPORTUNITY

One of the results of the European war will be, of course, to close the European spas and sanatoriums to American visitors, and the great army of invalids who make yearly pilgrimage to the other side will be thrown upon the alternative of either staying in their homes or patronizing American institutions. Doubtless there will be a large proportion who will elect to stay at home, these representing the class of people (principally women) who go to the European spas, not because they are sick, but because it is the fashionable thing to do. On the other hand, there will be another percentage, perhaps equally large, of potential candidates for the sanitariums of this country.

From which it would seem that the sanitariums of our country will share in the general opportunity for a boom in business which is presented by the war conditions in Europe, and to which we have already referred in another editorial—the question being, of course, whether the American institutions are capable of rising to the situation.

On the whole, the spa and sanitarium business, with a few notable exceptions, has not been a howling success in the United States. Perhaps in times past there have been ample and plausible reasons for this.

We have not, as a nation, been much given to coddling ourselves and idling in health-resorts. We did not have the knack of loafing gracefully or graciously. And, after all, as I have intimated, a great many of the visitors at the European spas have been the idle rich or the still idler social rank—a class that is very limited in this country, thank heaven.

However, in these days the function of the sanitarium is quite changed. The benefits of institutional treatment are well recognized and thoroughly promulgated among those who are genuinely sick, and there is a growing disposition with this class of invalids to avail themselves of it. Still, for some reason or other, the American sanitarium does not seem to meet the situation as it should. Those who can afford it, even of this genuine invalid class, persist in going to Europe; those who cannot afford it forego, in a great many instances, the institutional treatment which they, nevertheless, feel would benefit them. There must be some reason for this, some inherent inadequacy in the American sanitarium system, as a whole, which stands in the way of its success.

I am convinced that one reason, at all events, and that a powerful reason, is to be found in the lack of rigorous regimen in the American sanitariums. As a rule, these places are altogether too lax and easygoing. When patients go to Baden or Aix-le-Bains or Carlsbad, they are put and kept under a rigid course of living, laid down by the medical superintendent and enforced by the entire executive management. Their diet, their exercise, their time of rising and retiring, their environment, their participation in the special therapeutic features of the place, the baths, the waters, and all the rest are all rigidly prescribed for them by the medical staff, and they are held to them with almost military discipline.

This, indeed, is the proper system for a sanitarium or a spa to pursue; and, moreover, it is what the patients expect and appreciate. Under such a regimen, they feel that they are getting something for their money and are made to realize the advantage of systematic orderliness over their own slipshod, irregular modes of living.

Such a government constitutes, in fact, not only from the medical standpoint, but in the patient's mind, the prime *raison-d-être* of institutional treatment. These invalids wish to be put under iron rule and forced to do the things which, of their own pampered wills, they would not do. Even in their relations with their own physicians, all patients appreciate this sort of medical authority. No sick person has any real respect for the doctor who weakly lets him do as he pleases. The European spas understand this truth and apply it in their rigorously enforced regimen.

Contrast this severe, quasi-military system with the complacent, easygoing course followed by the great majority of American sanitariums, the inmates of which, as a matter of fact, are regarded and treated as *guests* rather than as *patients*. The prime desideratum seems to be the comfort and entertainment of the patient, rather than his health. The important thing is that he be pleased, not that he be cured. That, indeed, is the phase of the matter upon which most of our institutions base their exploitation; they dwell upon the luxuries to be had in the living-quarters and harp on the facilities for amusement and entertainment. They are, in short, not sanitariums at all, but hotels; the medical officer being a mere figurehead, who holds his position for the sake of a nominal concession to the fitness of things.

This, I am satisfied, is one big reason why the spa and the sanitarium system in this country has failed of the influence and success which it has attained in Europe. I repeat, I believe there is a great opportunity now at the doors of the American sanitariums, in common with all other home enterprises. Nevertheless, if they are to profit by Europe's misfortune in this direction, they must rise to the opportunity and show themselves equal to the demands of the times.

The day has gone by when a health-resort was a place for lackadaisical women to dance and play cards and gossip at while they "drank the waters"; the medical officer a sort of professional lackey, to dance obsequious attendance upon milady and complacently order her the things she liked. The latter-day institution must fulfill its modern function; its medical officer must be supreme and his regimen strict and inflexible. Only so can it command the respect and patronage of the American profession and public. Only by taking this leaf out of Europe's book can it profit by Europe's example at this time of the disability of those peoples.

War is one of the greatest plagues that can afflict humanity. It destroys religion; it destroys states; it destroys families.—Martin Luther.

THE USE OF APPETIZERS

One of the most common requests put to the doctor is for something to arouse the appetite. It is feared that nothing is a more common practice than for the practician to concoct some mixture of bitters, acids, and possibly digestants, and give that to his patient without much questioning—if the applicant wants an appetizer, he, sure, must need one.

To tell the truth, one can not study the conditions displayed by these patients very long, without asking himself whether any person ever really needs an appetizer.

The need for food is so imperative that one merely has to wait long enough, and the patient will be ready to eat anything that possibly may sustain life. The writer has seen men, who ordinarily would disdain a steak not done to their taste, greedily eat condemned ships' biscuit studded with black-headed worms. In Africa he has partaken of parched locusts, with relish. He has, in other words, witnessed and experienced real hunger.

Still, we see men who really need more food, are undernourished, and, yet, revolt at the thought of eating.

Why, then do not these people have appetite?

When the blood furnished to the stomach and to the gustatory nerves is impregnated with fecal by-products there is not likely to be much appetite. So very frequently is this the case that it is good practice to begin, in every instance where a lack of appetite is mentioned, by looking after the condition of the bowels. Give the traditional course of calomel or podophyllotoxin and follow with a saline laxative, and in four cases out of five your work will have been completed. Sometimes it is well to add a little bile or its active principles. But in which cases? The writer's rule is, to add this whenever the stools are too light in color, the bile being lacking. True, this may be because there is a stoppage, an obstruction in the biliary passages; but then we have actual jaundice. Bile may not be truly antiseptic; yet, its presence in the alimentary canal seems to inhibit some microbic operations, and its daministration is certain to be followed by improvement if it is given when indicated.

The symptoms formerly attributed to sluggishness of the liver are now known to be really due to fecal accumulation, decomposition and reabsorption; but, as the treatment by cholagogs rids the bowel of its accumulations, little harm was done by the error in the theoretical pathology. The coating disappeared from the tongue, the bad taste left the mouth, the muddy complexion and yellow conjunctivæ cleared up, and depression and melancholy were replaced by a sense of lightness and fitness, and the gloomy face was lit up with cheerfulness. The "liver" certainly was relieved.

Sometimes the stomach really does need a boost. A granule of quassin allowed to come in contact with the gustatory nerve-terminals, while in solution, gives exactly the needed fillip—much better than the tremendous potency inherent in strychnine. Add a little aid to digestion—pepsin-and-acid, diastase, papayotin, or one of their combinations, as the case seems to demand. We are not yet, by any means, free from these agents, but find place for them many times, although they are not used so indiscriminately as of old. Hydrastis may well replace the foreign tonic in most instances. Golden-seal is more than a bitter; its berberine contracts the relaxed gastric mucous membrane, while the white alkaloid hydrastine exerts an influence that is recognized by many more practicians than are able to define or to explain its mode of action.

In France, many physicians prefer brucine, but here the little sister is neglected for her elder one. Brucine is distinct in its powers and should not be thus confused therapeutically with strychnine. Notwithstanding the assertion of Murrell, brucine is not merely a "little strychnine," but it possesses a distinct power that is wanting in the latter. This is its property of inducing local anesthesia. By virtue of this, it is suited to cases displaying irritability of the stomach or actual pain there. Subacute exacerbations of chronic gastritis are quite common and are exactly met by brucine in doses of 1-2 milligram. It may be repeated quite frequently—every half hour, in case of great debility.

Stimulation of the sensitive nerves of the stomach often is needed, but is more apt to be overdone than neglected. A granule of capsicum fills the need, or one of piperine; either of which may be administered with the digestive and the tonic. In irritative states, these do harm; in relaxed, languid conditions, they add greatly to the efficacy of the remedies given conjointly.

It may be that the digestive secretions are vitiated or scanty, when we have two most effective agents at command in emetine and juglans. The latter well replaces rhubarb, with the advantage of very small doses. It is to be chosen if laxation is desired; emetine, when this is not the case so much.

Juglans for children, for beginning summer complaints, travelers' diarrheas, and decided nauseas; emetine for adults, for drinkers, for infections of the stomach and bowels, for persons in or from tropical countries, or those who have suffered from tropical dysenteries or other gastrointestinal maladies. Emetine is better if insomnia is a feature of the case; juglans for those who swill ice-water and rootbeer.

The presence of fetid breath indicates the need of an emetic in many instances, and usually of an antiseptic following. Many verify the selection of copper arsenite, others prefer one or other of the sulphocarbolates. It is often a matter of preference and of usage—a doctor will do better work with a drug to which he is accustomed than with one rather strange to his practice. But the sulphocarbolates act quickly and effectually, and are better for acute maladies; the arsenite may do good in chronic affections, in infections, in malarial and syphilitic persons, and as a succedaneum to the others when the patient goes from observation, traveling, and the difference in the bulk of the packet he carries is to be considered.

But, as we intimated at the start, the treatment, and especially the management, depends primarily upon the answer to the question, Why has the patient no appetite?

Self-trust is the essence of heroism. It is the state of the soul at war, and its ultimate objects are the last defiance of falsehood and wrong, and the power to bear all that can be inflicted by evil agents.—R. W. Emerson.

OURSELVES AND THE DRUGGIST

It is exceedingly regrettable that there should be, in any quarter, and to any extent, such a feeling concerning the relations between the physician and the druggist; that fidelity to the interests of the one should be regarded as tantamount to hostility to those of the other. Unfortunately, such a feeling does seem to prevail; we ourselves are touched by it. There seems to be an idea abroad that we are unfriendly to the druggist, for which the only possible basis can be that in matters pertaining to medicine we espouse the cause of the doctor.

Of course, we are *not* unfriendly to the druggist. On the contrary, we have the friendliest and kindliest feelings toward him, both as an individual and as a class, and have for many years enjoyed very pleasant and mutually advantageous relations with him—relations which we hope will continue to be exercised during many years yet to come. Naturally, being a medical journal, of the doctor, by the doctor, and for the doctor, we are concerned, first, last and all the time, with the doctor's interests. And when the interests of the doctor and the druggist happen to be, or at least seem to us to be, in conflict, as even honest aims and interests will sometimes be, it would be strange, indeed, if we

did not champion what we deemed the rightful claims of the medical profession, whose direct representative and voice we are.

But, because we have thus occasionally found ourselves obliged to cast our voice and our influence against the druggist in this or that question of ethics, or of economics, or even of principle, it does not therefore follow that we are unfriendly to him and his calling. Such a view of the matter is exceedingly short-sighted, and we earnestly ask our druggist friends to banish all such thought from their minds. We entertain the highest regard and esteem for the pharmacist and his work. Next to medicine and the medical man, our interest and sympathies logically center in pharmacy and the pharmacist. In the main, we look upon his interests as practically identical, or at least indissolubly bound up, with those of the physician. It is because of this that we believe a loyal fidelity to, and promotion of, the doctor's interests to be the very best evidence of our genuine friendship for the druggist.

Not only do we ourselves entertain the friendliest feelings for the druggist, but we continually preach the same sentiment to those with whom we have any influence, and endeavor to promote relations of mutual friendliness and advantage between the doctor and his druggist everywhere. We flatter ourselves that we have actually done a great deal toward establishing and furthering these relations. In fine, we look upon the doctor and the pharmacist as complementary forces in the same general cause, bound to each other by peculiar ties such as bind neither of us to any other profession or calling. That being so, how can we entertain other than the friendliest interest in all that concerns the welfare of the pharmacist?

How oft the sight of means to do ill deeds
Makes ill deeds done.

—Shakespeare.

THE CARE OF THE CONVALESCENT

The convalescent condition is one of vast importance to the patient, and, yet, one that is frequently neglected by his physician. The former is relieved of apprehension and begins to count the cost of his adviser's daily visits; the pressure of duties postponed and expenses incurred weighs upon him, and the call of his lifework becomes loud and strong. The doctor also is through worrying over that particular patient, and others demand his attention and engross his thoughts. Between the two, the patient too often is neglected.

Many a time the treatment and care cease when the dregs of the malady are still in the system, and there they remain. The seeds of lasting disease are implanted by too early resumption of duties, when the system still is overburdened by the debris of the affection scarcely completed in its course; the eliminants still are behind with their tasks, the nutrition is as yet unequal to making up the deficiencies, and the appetite, founded on real bodily needs, is ahead of the digestive and assimilative powers.

Little wonder that so many in after years date the beginning of their broken health from an attack of some acute infectious disease.

Keep your patient under control and treatment until he no longer needs either. How many difficulties would vanish were we to adopt the pay system of regular salaries for the doctors in place of the fee method now in existence.

Keep up the eradicant medication—the mercury, sulphide, quinine, arsenic—until the last possibility of the disease, be it syphilis, gonorrhea, malaria, or what not, has been extinguished. In treating infections, the correct hypothesis is the extinguishment of a conflagration: keep at it until there is not a spark left alive.

Keep up the elimination until every particle of the debris that loads the cells and the lymphatic system has been cleared away and the road is open for the ordinary waste of a body that demands extra quantities of foodstuffs to be worked up into repairs and reconstruction.

Keep up the supply of such foods as are required, in such forms and quantities as the patient can take care of properly. The appetite represents the needs, but not, by any means, the digestive capacity. This may be reinforced by the artificial digestants, pepsin, pancreatin, papayotin, and their combinations. Excellent forms of these are furnished, by the leading manufacturers, in tablet form, in which neither of the ingredients can digest the others. Nothing can prevent active pepsin digesting pancreatin in solutions Nothing can prevent alcohol, strong enough to keep animal digestants from decomposing, inhibiting the activity of these enzymes. If fluids are necessary, use pepsin with hydrochloric acid, malt extract for its diastase, or a pancreatin solution; but don't try to administer any two in the same liquid, and hope for benefit from both.

Keep down the exercise of mind and of

body to what the patient's returning strength is capable of enduring without undue waste of the newly energizing functions. Sedulously keep worry away from the degenerated cerebral tissues of your typhoid patients. Many a mental and nervous malady has its roots in this error—an inexcusable one, too, for we know very well that such results are liable to follow.

As a special medicament for the convalescent stage, we might descant upon nuclein. If any drug restores vital force, it is this. We know that the debility of the convalescent period affords special opportunities for new microbic attacks, and whatever reinforces the exhausted leukocytic garrison of the body is especially needed here. And, if nuclein does not do this, then, what does?

For the same reason, arsenic very often is indicated—to impart to the red blood-corpuscles a degree of resistance against any invading microorganisms that may penetrate to the blood stream.

Iron is almost a matter of course, the anemia of convalescence offering one of the most favorable opportunities for displaying the striking powers of the martial metal.

Quinine is too well established as a tonic for anyone to question its value now. Not only in malarial maladies, but in all atonic states this precious alkaloid has vindicated its reputation in the hands of thousands upon thousands of clinicians the world over.

What of strychnine? My conviction is that we prescribe entirely too much strychnine; that is, we employ it in too wide a range of conditions. Many times we do better by availing ourselves of the direct stomachic tonic principles of quassia, hydrastis or gentian; or of the tonic-digestant powers of juglans, myrica or xanthoxylin—remedies that should be more widely known and prescribed. Nevertheless, there are times when we must have the powerful uplift of the tetanizant alkaloid, and if administered in well-apportioned dosage strychnine never fails. Every function of the body responds to its energizing propulsion; every remedy administered in conjunction with it takes on new efficiency.

As a rule, the combinations of the tonics named do better than either one singly. The needs of the body rarely are simple, but debility of one function carries with it similar weakness of the others; and a group of synergistic remedies works better than one alone. In cases in which the highly effective combinations of arsenates are not indicated, we may utilize those in which the combining element is phosphorus—the much used and abused compound phosphates and hypophosphites. Whatever may have been the hypothesis upon which these salts were first introduced, Robinson is right in asserting that nowadays we use them because they do the work we want done—they "deliver the goods." Doctor, is it not a matter of surprise and concern to you when you have prescribed this combination and your patient reports no improvement from its use? That puts your wits at work to detect the underlying condition that has interfered with the otherwise sure action of this great roborant.

The convalescent stage is one in which long since we have recognized the benefits following the administration of calcium salts. Now we are told that in pneumonia there is an absorption of calcium by the invading parasites, and that safety lies in our keeping up the supply necessary for the bodily needs. If so in this infection, it probably is true in others; and our use of calcium salts is justified. For many years we have given preference to the lactophosphate of calcium, because it is soluble in water and presumably gives less trouble and work to the bodily chemistry than do insoluble forms. Why burden the vital functions unnecessarily?

Following this same line of reasoning, we have for years been partial to the foods that throw least work upon digestion and assimilation. The food that animals take with least digestive effort is the white of egg, which is absorbed by the fetal chick without passing through any digestive system. Egg-white passes into the developing alimentary tissues with a minimum of digestive effort, hence is an ideal convalescent food, when proteins primarily are required.

Take one step further—the only possible step remaining—and we have blood itself. Transfusion comes nearer than aught else to raising the dead. Use blood as a food, and it certainly is digested, but it surely must take less to accomplish its utilization than any other food. In practice, our use of the preparations that are based on blood as their main constituent has vindicated our belief.

Lecithin is a newer remedy, but has much authority backing it. The same reasoning applies to it as to nuclein. The effects of such agents is more like that of foods than of ordinary drugs, and it is difficult to estimate their values unless one has a laboratory to reinforce his clinical observations. But, then, the modern physician has to have such backing. So, why waste time discussing it?

The food should be given at short and regu-

lar intervals, as the needs are incessant and the digestive power is small. Give every four hours as much as the digestion can manage well, increasing as it gains power. At first choose the very nutritious and easily digested foods—soused meats, raw beef and oysters, clam broth, turtle soup—somehow the shellfish seem to slip into the system with less bother than other proteids. Rice, uncooked fruit-juices, barley-water or oatmeal-gruel as drinks instead of the caffeine-bearers, and the excellent partly digested cereal foods.

No alcohol in any shape or form, not on any excuse. It is a disaster to the convalescent.

PROHIBITION SUCCEEDS

Advices from friends in West Virginia indicate that the prohibition law that went into effect the first of July is proving a success. A drunken man is now a rare sight in the streets, and the saloons have been converted into other kinds of business. While it is not likely that the use of alcohol will ever be entirely stopped, it nevertheless is being greatly curtailed and its patrons limited to those who already have fallen under its power. Many a man will go into a convenient saloon for a drink who would not go a few squares out of his way for its sake.

However, the principal value of prohibition lies in the fact that it keeps temptation from adolescent youths. If we can carry the boy to the age of discretion, without touching liquor, it is far less likely that he will take to it later; for by that time he knows its evils and appreciates the arguments against it.

The true test of the matter comes when in a given locality the few remaining cases of inebriety are investigated and the source of their supply ascertained. If it is an illicit rumshop, swift and heavy punishment should be visited upon this meanest of lawbreakers. If, as probably is the case, the Ohio towns across the line from West Virginia furnish the alcohol, the situation is more difficult. Public sentiment should be aroused, in that state, and the people should be made to see that debauching the citizens of a neighboring commonwealth scarcely is compatible with the repute of the modern mother of presidents.

Let Ohio do its duty, and we should still have to deal with the petty malefactor who "bootlegs," and the one who runs a well-stocked houseboat along the river, dodging across the line whenever the officers of either state get close to him. With all our respect for the statute law, it seems as if sometimes there were room for natural law, of the sort that the people take into their own hands.

The evils of alcohol are so tremendous that upon every one of us devolves the duty of doing his best to combat this scourge. While concerted action accomplishes much, while the united efforts of womanhood have placed the prohibition laws in the statutes of many states and smaller communities, there is room and duty for every one of us. No other man can do as much in this line as the doctor; and all the more is the duty incumbent upon us, as we have been directly charged with aiding in creating the habit.

We may have aroused a sleeping craving for alcohol in some, or in many, by prescribing alcoholic remedies; we should not do this in any case. We do not have to prescribe alcohol; there is not a solitary use to which it can be put for which we have not as good or better remedies at our disposal.

This may seem like barking at an empty hole, for we do not nowadays prescribe wine and liquor very often. But how about alcoholic drugs?

More than once this writer has incautiously prescribed the pleasantly flavored spirituous concoctions of the pharmacist and then taken alarm at the warmth with which the patient approved of their taste. More than once has he witnessed an unsuspected thirst for liquor aroused by some alcoholic drug. One never knows—the growing boy may have had a grandfather who was addicted to whisky, so powerfully that he has transmitted the craving across a sober generation to the second.

The remembrance of even but one such case is enough to give a bad taste to one's dinner; and a sharp twinge to his conscience. Better avoid the possibility of it. After all, can we not get all the virtues of any drug out of its solid forms, pills, tablets, powders? Must we use the tinctures and other alcoholic forms?

PLEASE READ THIS

One of the most important therapeutic announcements ever made appeared recently in *The New Orleans Medical and Surgical Journal*. It dealt with the treatment of pyorrhea with emetine, administered hypodermatically. This is a development of the idea of Barrett and Smith, recently discussed in these pages. We are reproducing that editorial in this number, in the department "What others Are Doing." Be sure to read it. It records another and one of the greatest triumphs for the alkaloids.

Leading Articles

The Surgeon's Work in the Great War

Reported from the Firing Line

By T. D. Crothers, M. D., Hartford, Connecticut

EDITORIAL NOTE.—Doctor Crothers has given us in this interesting article a report of actual surgical experiences with the British army in the field, as embodied in letters to him from a warm personal friend now serving in France. For obvious reasons the name of his correspondent can not be divulged. We hope to be able to publish more of these letters in succeeding issues of this Journal.

AN ENGLISH surgeon on the front line of battle has sent me some very interesting items regarding the work that is going on there, which I am sure will interest medical men in this country.

Physicians of England connected with the military organization of course had to go to the war, unless they could find substitutes. In addition to this, a great many young surgeons as well as some older ones volunteered. They all went off silently, without any public notice, only their immediate friends knowing of their departure.

After the first two engagements the medical work took on a fixed character. The younger men, including hospital students who were commissioned as acting surgeons with stretcher-bearers, kept along the front lines, in close proximity to every engagement, both of artillery and infantry. Their work was, to give first aid to the wounded and direct them how to go to the rear. They decided as to those of the wounded who could not be moved, for fear of early death, and had them put away in secluded positions, making notes of their names and the nature of their injury. After a fierce engagement, if the enemy retired, they were to make note of the burial trenches, particularly of the killed who were interred, and also to designate the location of these trenches.

Some miles in the rear, the main hospitals were established. Here the operating surgeons looked over everyone that came in, performed the operations necessary, sent them farther inland, or determined whether they might be taken back or sent to their homes. The surgeons here were of the older men, who were able to make very accurate diagnoses and prognoses, and do exact work under the most favorable conditions. Most of these hospitals were out of the firing-line; but the distance varied widely, according to the success of the opposing forces. Sometimes these hospitals were within a mile of the conflict. They were all situated on some stream or near a big well. All were in such a shape as to be removable in a few minutes in case of necessity.

The country had all been mapped out by the French and Belgian governments with great minuteness. Every farmhouse, stream, grove and forest, valley, contours, and so on was thoroughly known to the commanding general, so that the disposition of every company and every battery was exact. Telephone lines on the ground ran to the rear, enabling the commanding officers to know the exact disposition of every movement of the troops. Airships overhead confirmed this information, and there was a military exactness about the work such as never was seen before.

Terrific Mortality From Artillery Fire

Wherever the machine-guns were used, the mortality was frightful. Some men were shot a dozen times. Fortunately the line usually was very thin. The schrapnel inflicted most damage by the fragmentary wounds, cuts, broken legs, broken arms and so on caused by them. As compared with the number of contusions, bullet-wounds were very few.

The medical men and hospital-corps were pledged not to reveal any facts to the public, and a severe censorship was exercised over all personal opinions; and, yet, all the medical men were allowed to keep very copious notes, as were also the officers. The exactness with which the movements of the enemy were noted, as also from where they seemed to come, if in great masses and intending to

break through the lines, called for a large number of the hospital-men. Often before the infantry engagement took place a half dozen flying hospital-stations would be established, and the stretcher-bearers and medical corps would be close along in the rear of the charging lines.

Each physician knew the location of the nearest hospital. When a man was brought from the front, whose injury required immediate attention, the doctor did what he could, then sent him to the exact place where more pronounced aid could be given. If the line of conflict in front was changed some two or three miles in either direction, the doctors were so informed and ordered to report in that neighborhood. If there were woods or deep gulleys or creeks, the leading medical men in the rear told those in the front how to adapt themselves or take advantage of circumstances, so there was very little confusion.

Now and then an enthusiastic company would dash out beyond the front lines and be destroyed or the men taken prisoners. The medical attendants in that neighborhood were to exercise their judgment in not following to the extent of being captured. Oftentimes these men were so severely wounded that they could not be reached, without the danger of the stretcher-bearers being captured.

Often the Germans gathered up the wounded and took them along. Usually, however, they were left on the field, and when the airships told those in command that the enemy had receded at that point the medical men had to go forward and bring in the wounded. The dead, of course, could not be buried at the time. Much of this work was done at night; for, German sharpshooters, during the day, would fire into these searching-parties if they had a chance.

A Severe Censorship

Many of the wounded, on reaching the central hospital, collapsed and were placed under the best conditions for temporary recovery. Those who could stand it were sent back to the rear, by means of all sorts of conveyances. Eventually they were sent to the channel-ports and taken home to the various hospitals in England. The same censorship mentioned stopped the gossip and talk of these men, so that the press has very little idea of the terrible scenes through which they passed.

The central hospitals, back from the front, were managed by most capable medical men. They were supplied with soup-kitchens and every possible appliance; but no spirits or beers were allowed. Strychnine is being used very largely, and also some other drugs of that nature; however, water and the ordinary antiseptics were the most commonly used remedies. These central hospitals had a certain supply of shirts, clothing, and blankets, to make the wounded comfortable; also vehicles of all sorts for transportation in case of removal.

The severe rains and cold weather made it almost impossible to protect the patients, except those most severely wounded. Others who could walk or had minor wounds were hurried to the rear as far back as possible. The desperate cases, on the other hand, were protected by straw stacks, hay stacks, sheds, and any other available thing.

The surgeons were divided. The operators worked half a day at a time, and the rest of the time they visited and supervised the dressing and care of the wounded. It was found that six or seven hours spent in examination and operation was about all the surgeon could do, and where substitutes could be found they were called into service. The dressers and nurses could not always be concentrated at the proper time and place, and in some engagements that lasted several days it was possible to have nurses of the Red Cross and others gathered in numbers to do the work.

The whole twenty-four hours were occupied by the surgeons and assistants in dressing the wounded, performing operations, and determining where they should go. Many of the engagements continued all night and day, and the wounded were coming in constantly; and the scarcity of surgeons at some places kept many men on duty for the entire twenty-four hours.

Accuracy of News of Movements

The system of telephoning was so perfect and the observations of the airmen so exact that the officers in the rear could determine with much certainty where the medical men would be needed; and the medical men would, from a map of the surroundings, decide where a hospital would be most available.

A great many volunteer surgeons have returned to England as fast as their places could be filled. Almost every medical man who has any qualifications or experience is warmly welcome. A number of American surgeons have quietly been put into service. But on all is the pressure of the censor, not to reveal anything to the outside world.

My surgeon friend expresses the opinion

that the mortality is greater in this war than it ever was before, while the number of the wounded is far less in proportion. He thinks the medical care has been the very best both in the German and French armies. He praises the wonderful system and accuracy of details in the artillery fire as well as in the machine-gun work. He notes the fact that a great many wounded Germans who have been taken prisoners are much discouraged; hence, their mortality is greater. On the other side, there seems to be more optimism and cheer. No distinction is made: wounded Germans who were taken prisoners receive the same treatment, and they fall in at once with their enemies in the most business-like way.

My friend thinks that the number of prisoners on both sides will be smaller than in any other war, because of the exactness with which the movement of each company and regiment can be determined. In closing his letters, he expresses a wish that ambitious young Americans who would like to see something of the great conflict should go to the war office in London with their credentials and secure an appointment, especially in the English army. If they can speak French, they will be warmly welcomed in the French army.

The Letters of Doctor Leonidas Playfair

Addressed to a Young Man Just Entering Practice

By A. H. P. Leuf, M. D., Philadelphia, Pennsylvania

EDITORIAL NOTE.—The difficulties of the young doctor! How many there are and how mountain-like they seem to the youngster; and how small and inconsequential they appear to us older fellows compared with the burdens we are bearing. However, let us give the boy a lift, in other words— advice! Old Doctor Playfair understands the problems and aspirations of youth and can speak for us all. If his first letter pleases he will write again.

LETTER I.

On A Suitable Location

MY DEAR FRIEND: Your request for advice concerning the selection of a location in which to begin the practice of medicine reached me this day, and it is a pleasure for me to comply at once, for I hope that you will find my suggestions useful and easy to follow. I will also take this opportunity to tell you that the past three years of friendly intercourse between us in the relation of preceptor and pupil have really drawn me closer to you than I realized, until after our separation a week ago for an uncertain time, perhaps forever. Hence, my increased interest in, and solicitude for, your welfare.

You say that you have no idea as to where to locate, and desire suggestions from me in any way that may assist you to success and aid you in the avoidance of the many pitfalls so open to the beginner in practice. You assure me of your eagerness to repay me in the future, as far as lies in your power, as well as you did in the past for what I have already done. On this matter rest assured, however, that no other return can be as satisfactory to me as that you would so benefit by my efforts and counsel—past, present, and future—as to meet with merited success. And lest you might misunderstand my meaning in regard to that significant word "success," let me say what I would have it signify to you.

The Meaning of "Success"

As for me, I would have the word "success" to mean that, when you rest your weary head upon your pillow at night, it would be with the gratified consciousness of having done during that day whatever lay in your power to lessen the sufferings and to add to the happiness of those whom you have met; that you have not permitted anyone to obtain an unfair advantage over you because of your indifference or weakness; that you had not neglected any duty to yourself as a man or to the community as one of its citizens in the fearless unmasking and prosecution of a wrong; that you had maintained your highest self-respect by respecting others according to their due, and rendered to those older or abler or more experienced than yourself that regard for these qualities to which they are by nature and circumstances in all equity entitled.

And this, in short, should be your daily habit, so that when you die, whether this be soon or remote, no one whose good opinion

you crave can say aught against you, but would rather be compelled to remember you with heartfelt regret, and not alone for your merit as a private individual, but, moreover, as a practitioner of ability, a true friend, a wise counselor, and a citizen of public spirit. This is, essentially, the only real, true, genuine success, all others being shams.

City or Rural Practice

The selection of your field of labor is a very important matter. This is not so important for those who have unusual powers of adaptability, because they can readily adjust themselves to any reasonably fair environment. For you, however, who do not possess this rare quality, this question will require the most careful consideration, for it involves the decision between city or rural life, or that combination of both—which really is neither—in what is called a small town.

If your tastes are rural, select a section of the country that pleases you most. Consider it with reference to all seasons of the year, so that, though you may be in love with your surroundings during one period, you may not be unduly dissatisfied with them at some other one.

Furthermore, do not overlook the strain upon your health imposed by night work in cold and wet weather in country practice, since that in a few years might oblige you to yield to another, and at a loss, the field your arduous labors will have cultivated. Moreover, such a misfortune may totally undo you as it has so many others who have not had the courage to begin anew. And such a calamity would be augmented by your impaired health and entailed separation from acquired and valued friends. All these things are to be considered.

If your tastes are scientific and literary rather than of that hardy practical character required of the plain, everyday "doctor," the city is likely to be a more suitable abiding-place; if, however, you have not the means to sustain yourself until you build up a living-practice—which usually requires at least one or two years for a single man of moderate needs—you may not hope to remain in the city unless you connect yourself with an established practitioner as his assistant.

Assistant Partnership

This brings up the important question as to whether it is or is not advisable to be an "assistant" to anybody in private practice. Many a prospective bright future has been blighted by the mill-stone of assistanceship. This relationship carries with it the indelible stamp of inferiority—an incubus with which no wise man will rashly encumber himself, however temptingly the inducement may offer. True, it makes an easier beginning than does independent action, but, on the other hand, all future progress is thereby retarded, if not even made impossible.

And, yet, it by no means follows that the city is the best place for the studiously inclined. The proximity of the libraries and the opportunity for association with one's fellows constitute advantages; nevertheless, these can be very little indulged in if one's object is, first of all, to make a living and build up a home. Besides this, city life offers many more profitless inducements to neglect work than does the country, while one is subject to numerous unnecessary interruptions by adventitious callers. On the other hand, the young physician in the country has, at all events, the opportunity to study in greater quiet and freedom from breaks upon his continuity of thought.

Still, the question as to choice, city or country, after all is mainly one of personal predilection, and is governed by individual taste and requirements, besides numerous other factors that each individual must, as a rule, decide for himself.

The New Country For The Enterprising

Young and vigorous men, especially those with a spirit of adventure, are best fitted for practice in sparsely settled, usually new communities, or they may go to new countries. Our own far-western lands still offer many such locations. Then there are fertile fields in Mexico and South America. Africa affords another promising opportunity.

But, no man should undertake such a venture without due consideration. Too young a man is liable to be disappointed in such an enterprise because of his lack of experience, both in his profession and his knowledge of human nature. Practice in a new region often means a trip of many hours on horseback to get to the patient, and as many more to return. Results are not as satisfactory as they might be if patients were more accessible and could be seen oftener, although the advantages of a splendid climate and the superb physiques of patients in virgin territory add largely to the recuperative powers of the individual.

The small country village is too apt to be full of inane gossiptongues ever ready to say an unkind word rather than to speak well. An indiscreet man easily becomes a prey to

indirect vilification, and, worse yet, carries with him those of his patients suitably related to him to provide a soil for the growth of foul rumor.

Thus, greater alertness is required of the doctor in a country village than in a city practice. He is most independent in this regard in the largest cities, just as that man is said to be most lost in the world who is in the thickest of it. The best place to escape detection is in the great centers of population, and in the midst of their teeming thousands do we have the greatest suffering, for the reason that few care to trouble themselves about the innumerable difficulties of so many others, to which one becomes accustomed by continued familiarity.

Counsel Anent City Practice

Should you decide upon trying your future in the city, I would advise you to locate in a populous neighborhood. Here, the people, though poor, usually are honest and pay their bills, unless too much in debt to be able to get out entirely. They are paid every week or two, and spend their wages as they get them. Some few save. Be reasonable in your charges, close in your collections, and courteous in your treatment; but permit no familiarity, nor encourage useless waste of your time.

In such a neighborhood, and by closely following these outline precepts, you ought soon to be paying necessary expenses; after which you can add to your professional appliances and enlarge your field of work. Thus you build up your reputation as a man and physician until it reaches those able to pay you larger fees. The first step, once taken, soon leads to others, until your final position may be anything, within reason, that you choose.

Young men ambitious of social preferment often make the fatal mistake of locating in a wealthy neighborhood. Unless possessed of ample means, in which event it is his natural location, such a man only advertises his poverty to those with whom he would find favor and mingle on an equal footing. The independent self-made man is admired everywhere. The "aristocracy of blood" too often has in it only a little sense, whereas that of true worth is nearly all sense, with a sprinkling of unavoidable, though largely justifiable, egotism.

If your tastes are social, build up your way by able, patient effort, honest dealing, and courteous bearing. Live well within your income, so that you may accumulate a working-capital. Plan well and absolutely secure every advance move, so that there be no danger of retrogression, of failure, for that is a misfortune that the social moths can never overlook. But more of this subject at some future time.

Be careful not to locate in the neighborhood of a large hospital or dispensary, opposite a park or close to a railroad. Your location should always be relatively central, so that practice may come evenly to you from all directions. A railroad or a park virtually cuts you off from the territory beyond. It is one peculiarity of human nature that people will go a much farther distance through a built-up section than a shorter one through a park-way or along a park-side or railroad. There are other places, having the same effect, near which a physician should not locate. For instance, a river, a lake or an unbridged creek.

In short, then, locate so as to be equally accessible from all sides. This means that in large cities you should select your location with a view to its accessibility from different patients on the surface car-lines, and, still better, also by one or more railroads.

With the motives that actuate the purely mercenary graduate, I have no sympathy, and trust, and heartily believe, that you, my friend, ardently share this feeling. But never forget that you must ever have in mind pecuniary matters so long as you depend upon your fees for existence and the acquirement of additional knowledge; for, you have consecrated yourself to the welfare of your fellows, and can do this sublime duty only by properly caring for your bodily and mental needs; and this your receipts from practice alone can supply.

I shall be more than pleased to advise you further after you have settled upon a location. Meanwhile believe me, with sincere regards and well wishes,

Your true friend,

LEONIDAS PLAYFAIR.

Rational Therapy for Pneumonia

By J. M. French, M. D., Milford, Massachusetts

EDITORIAL NOTE.—This completes the discussion of pneumonia begun by Doctor French in the October number of "Clinical Medicine." The two papers should really be read together.

THE principal considerations in the treatment of pneumonia may be grouped under five headings, namely: (1) the digestive system, (2) the fever, (3) the heart, (4) the lungs, (5) the nervous system.

The Digestive System

A large proportion of cases of pneumonia are characterized at the outset by a coated tongue, a bad taste in the mouth, an overloaded stomach, more or less constipation, an inactive liver, and sluggish secretions generally. Where these conditions obtain, the first thing to do is, to clear out the alimentary canal before adopting any measures against the pneumonia directly. Moreover, do not allow the patient to get any food whatever until this is done. In fact, no food at all should be given in these cases for the first day or two. A little judicious starving will do such a patient good. Do not worry about nourishment; when the time comes that he wants to eat and can digest, then is the time to think about feeding him. From that time on, though, the problem of proper nourishment is of supreme importance.

There are a good many ways of clearing out the intestinal canal, and no one of them is always the best. When you see the patient early and the urgency is not too great, you may prescribe calomel, in divided doses of 1-10 to 1-6 grain, every fifteen or thirty minutes, until 1 grain has been taken (or the same combined with an equal dose of podophyllin), followed in an hour or two after the last dose has been taken by a good-sized dose of saline laxative. I find this one of the most satisfactory measures for the purpose. Often, in the case of adults, I give a triplex pill, composed of aloes, blue mass, and podophyllin, at night, followed in the morning by a dose of laxative saline as before. There are times when a good dose of castor-oil is better than either of the foregoing.

It is not well to confine oneself to any one method. The great thing is, to get the desired result. The dose of the indicated remedy is not any arbitrary number of grains or drams, but enough to produce the effect aimed at, and no more.

Nearly or quite all pneumonia patients are benefited by this preliminary cleaning out. Similar measures should be adopted, choosing such dose and such intervals as may be needed, for keeping the alimentary canal in proper condition. Do not let the patient become constipated at any stage of his sickness. A properly functionating bowel always is a *sine qua non*.

The character of the food to be taken does not depend so much upon the "name of the disease," as upon the condition of each individual patient at a given time. If he relishes and digests beefsteak, then there is no reason why he should not have it. If he can digest only milk and lime-water or any one of the numerous varieties of liquid food at command, then that is the proper food for him. Each case must be judged on its own merits. But nourishment of some proper kind the patient must get, and get it in sufficient amount to keep up his strength, if he is to pull through and recover his health.

The Fever

No doubt some cases, running a mild course and where there is only a slight rise of temperature, would progress just as well without special treatment for the fever. It is a significant fact, however, that pneumonia-cases in which there is only a low-grade fever are the most dangerous of all. The rule of prognosis, based upon the highest temperature reached at any period of the attack, is, that *the mortality decreases steadily as the temperature rises, up to 105 degrees, after which it increases with the further rise of the temperature.* The line of greatest safety is found when the highest temperature is between 103 and 105 degrees. The reason for this phenomenon is found in the fact that a low temperature is the result of a low vitality and lack of resisting power. The remedy lies, not so much in lowering the fever, as it does in raising the vitality and increasing the resistance of the patient.

The principal fever-remedies relied upon by the active-principle therapist, and used in the form of soluble granules, are the following: aconitine hydrobromide, (gr. 1-800), veratrine hydrochloride (gr. 1-128), the "trinity" granule (containing aconitine hydrobromide, gr. 1-800; digitalin, gr. 1-64; strychnine arsenate, gr. 1-128), and the defervescent compound (containing aconitine

hydrobromide, gr. 1-800; veratrine hydrochloride, gr. 1-128; digitalin, gr. 1-64). With these four kinds of granules, he feels well able to combat with most of the grades and varieties of fever, and to do it successfully whenever success is possible.

Aconitine is the great fever-remedy, and is indicated especially in children, in the early stages of acute fevers, and in asthenic cases where the pulse is quick and weak. The usual adult dose is one granule, preferably dissolved in a teaspoonful of hot water. It should be given every half hour or hour, or sometimes as often as every fifteen minutes for a few doses. When the medicinal effect is evident, as seen in the establishment of perspiration, the tongue becoming moist, the pulse softer and slower, and the temperature lower, then the frequency of administration is lessened to one hour, or frequently even to less.

Veratrine is the remedy of choice in sthenic fevers, when occurring in strong and vigorous adults, and is indicated by a full and bounding pulse. This is the theoretical indication. Practically, I can say no more, as I never have used it in pneumonia except in combination with aconitine and digitalin, in the form of the defervescent compound.

Very often the trinity granule is preferable to aconitine alone, especially where there is notable debility or a weak or diseased heart, as in alcoholism, old age, and other asthenic conditions. This combination may safely be given every half hour until the medicinal effect is produced, and then every hour for as long as needed to maintain the effect.

When the crisis is passed, the fever gone, and the temperature normal or subnormal, it often is well to stop the trinity granule and in its place give one granule of strychnine arsenate and one of digitalin, thus omitting the febrifuge effect of the aconitine, while continuing the tonic action of the other ingredients. This dose of strychnine and digitalin may be given every two hours as long as needed. They may be given in solution, or, in case their bitterness is strenuously objected to, in the granule form, but always with a few swallows of water, to favor solution and ready absorption.

It is probable that the defervescent compound is being prescribed less frequently than its companion, the trinity granule; but in its place it is unexcelled and unapproachable. Given a patient with a good constitution, I know of no other remedy which will abort so many attacks of pneumonia as this one. Also, where the milder remedies fail to control the fever satisfactorily in sthenic cases, this combination will do the work, and do it well. But it should not be continued when the sthenic condition is changed to the asthenic; when this supervenes, it should be changed for the trinity granule instead.

In cases of pneumonia complicated with pleurisy, and presenting a sharp pain in one or both sides, the pain being of a tearing, stabbing or stitching character and made worse by motion, while relieved by rest, bryonin, 1-64 grain, may be given in addition to the basic remedy, whether this is aconitine or one of the compound granules.

The Heart

More pneumonia-patients die of an overburdened heart than from any other cause. In fact, as has already been said, the great danger in this disease comes from the heart. More than this, the action of the heart, as indicated by the pulse, is the great guide, not only to the therapeutics, but to the prognosis of pneumonia. Based upon the highest pulse rate throughout the disease, the experience is, that *the mortality from pneumonia is in direct ratio to the frequency of the pulse.* An irregular, intermittent or dicrotic pulse always is suspicious and often a sign of danger; but, in formulating this rule, the frequency alone is considered.

The most important remedies in the treatment of heart aberrations in pneumonia are the following: First, strychnine and digitalin, which have already been considered, as forming a part of the two compound granules employed in the treatment of the fever, and the indications for which are well understood; and, in addition to these cactoid, glonoin (or nitroglycerin), and caffeine.

Cactoid is of especial value in the irregular or nervous pulse. Glonoin is given to relax the arterioles and relieve the overburdened heart, flushing the capillaries and strengthening the pulse; its action in these respects resembling to some extent that of alcohol. By the intensive method of dosage, this remedy is administered in doses of 1-250 grain instead of 1-100, and is repeated once or twice at intervals of five minutes in case the primary dose is insufficient; or, the three granules may be given at one dose, if thought necessary. But, in general, the single small dose is sufficient; and "the smallest possible quantity of the best obtainable means to produce a desired therapeutic result" is always to be preferred to a larger one.

Caffeine is a valuable heart and brain stimulant, whose beneficial action in medicine would be more often utilized, were it not so

universally present in our beverages. As is true of alcohol, caffeine is less efficient as a medicine where the system already is habituated to it. Also, this alkaloid must be given in larger doses. But, in any event, the effect of caffeine in sufficient doses is, to stimulate the entire nervous system, more especially the heart, brain, and kidneys.

The effect upon the brain is particularly desirable when there is a condition of depression; this, in pneumonia, may sometimes approach to unconsciousness, and from it the patient can be roused only with difficulty. Caffeine is best given hypodermically in these conditions. In this connection, it should be remembered that, uncombined, the base caffeine is quite insoluble in cold water and can be used hypodermically only by having the water, the spoon, and the syringe kept hot—which is not convenient. Therefore, it is advisable to use the caffeine sodium benzoate, which is readily soluble in cold water and, consequently, to be preferred. The dose of this compound is double that of the alkaloid, of which it contains 48 percent.

Alcohol, which formerly was almost universally prescribed in pneumonia, as well as in all fevers, is now but little employed, and the advocates of its free use are but few. Since we now have other agents that will serve all of the purposes for which it was formerly used, and serve them better and without the dangers attendant upon alcohol, it would seem to be the part of prudence to have recourse to them. Least of all is there now any excuse for giving alcohol under the impression that it is a stimulant. Its only use that might seem to be warranted by modern views is that of an anesthetic.

The physiological demand in relation to the heart in pneumonia is, to keep the patient in bed, and, further, during the period of and following the crisis, and until all danger from heart weakness has passed, to keep him flat on his back, not even allowing him to raise himself in bed during the period of more extreme weakness. Many patients have lost their lives by getting up too soon after pneumonia. Walking cases are especially dangerous for this reason. Never let pneumonia patients keep about the room; it is inviting death needlessly. Rest in bed, and, in all severe cases, the supine position, must be the rule.

The Lungs

As a rule, the prognosis as affected by the respiration is: *the mortality increases with the frequency of the respiration.*

The two chief symptoms connected with the lungs which need attention are, pain and cough. If the heart does not give way, if the brain is not overcome by the toxin of the disease, the lungs may be depended upon in most cases to hold out through the regular stages and come out all right.

The first point to be observed with reference to the lungs in pneumonia is, to see that the patient has an abundance of fresh air to breathe. As his breathing-capacity is limited to only a portion of the normal, it is of the utmost importance that he should be able to make the most of what is left.

Put him in the best room in the house, large and airy. Put the bed well out in the room, not up in a corner where the air cannot reach him. Many times a cot in the open air is desirable. I do not believe, however, that a pneumonia patient can safely be exposed to all sorts of temperatures, and to winds and rains and snows. I believe in pure air, and plenty of it; but it should not be extremely cold air. I know that there are many better men than I who do not agree with me in this, but I must tell what I personally believe, if I say anything.

The second point is, to check the cough when it becomes troublesome, to moderate its violence, keep it from becoming harsh and tight, and, in general, see to it that it does not wear out the patient. Still, a moderate amount of coughing is not a disadvantage, on the one hand, nor is it a necessity in all cases of croupous pneumonia, on the other. The common lay idea, that the exudate must be coughed up, is erroneous. Frequently it is absorbed, with equally good results.

No set rule for managing the cough can be given. All depends upon the amount and character of the cough itself. Sometimes it needs absolutely no attention whatever. Then, again, it calls for all your ingenuity to combat it.

External Measures

In considering the therapeutics of the lungs in pneumonia, we will consider first external applications to the chest. These are favored by some physicians, while opposed by others.

When the attack is accompanied by a sense of tightness across the chest and great difficulty of breathing, and especially by a sharp pain on drawing breath, (indicating pleuritic complications), I know of nothing which will relieve these symptoms more quickly and satisfactorily than a mustard-plaster applied over the affected region. This should be left on only long enough to produce hyperemia by

counterirritation, never being allowed to stay on long enough to cause a blister. Used in this way, the sinapism relieves the unpleasant symptoms, while doing no harm. If allowed to blister, however, the soreness resulting will interfere with any later applications, should such be desired, besides causing much needless discomfort to the patient.

If there is no pain and little or no difficulty in breathing at the outset, it is better to begin with an antiphlogistine poultice, or else omit all external applications. If, after the mustard has done its work, it is thought best to make further outward applications, the antiphlogistine makes as good and as convenient a poultice as anything I know of. Many prefer to use the cotton jacket from the first, while others make no application to the chest from first to last.

You must study the condition of your patient, then make your choice. I do not like the cotton jacket, because there is likely to be danger of catching cold in taking it off after the decline of the fever, unless it is done gradually.

When the patient is robust and plethoric and the fever is high at the outset, an excellent application is that known as the guaiacol inunction, made by mixing equal parts of guaiacol, oil of eucalyptus, and methyl salicylate. This may be used as a local application to the chest in the early stages. Only a small amount is required, and it should be well rubbed in. The usual effect is, to induce profuse perspiration, lower the temperature, and render the patient less uncomfortable. However, I doubt its advisability in asthenic cases. It should not be repeated more than a few times, nor continued beyond the early stages.

If the cough is tight and wearing, try this "A-C-E" mixture, which is best made freshly every day at the bedside, by dissolving 24 granules each of apomorphine, codeine, and emetoid, in 24 teaspoonfuls of hot water. Of this solution give a teaspoonful every fifteen or thirty minutes until the tightness is relieved, then once an hour or less often, as may be needed. This will loosen a tight cough as well as anything I have ever tried.

If the cough is hoarse and barking, as in measles or bronchopneumonia, then one or two granules of calcium sulphide, 1-6 grain, every hour, will moderate the trouble greatly. And creosote, in some of its forms, will exercise a favorable influence upon the cough. For this purpose, I am partial to the solution of calcreose, given in dessertspoonful doses every two to four hours, well diluted with water. It acts as an antiseptic and expectorant, and lessens and loosens the cough.

Creosote carbonate, employed according to the method advocated by Beverly Robinson, of New York, and by Van Zandt, of Texas, in many instances brings on an artificial crisis, or else hastens resolution. Van Zandt declares, as the result of his extensive experience, that he has seen many cases aborted, more mitigated, with a very small number seemingly uninfluenced by the remedy.

My own preference in these cases is for the preparation known as thiocol, which virtually represents the active principle of creosote, but chemically is known as potassium sulphonate of guaiacol. This may be given in divided doses up to 50, 60 or 80 grains a day, with absolutely no unfavorable effect upon the stomach or any other organ, and has seemed to me to be capable of meeting all the claims made by Van Zandt, besides being much more acceptable to the stomach and in no way disagreeable to take.

The Nervous System

In addition to the four cardinal points already considered, there are some other things which may perhaps be as well considered under the head of the nervous system as anywhere else.

When there is severe and continued pain in pneumonia, either in the lungs or elsewhere, and not relieved by milder measures, morphine hypodermically will, in most cases, promptly give relief and prove of permanent benefit; and it should be given unhesitatingly. Severe pain, regardless of its cause, is very exhausting to a sick person, and its relief contributes not only to his comfort, but to his recovery.

Some cases of pneumonia, especially in elderly persons, are marked by early and extreme prostration, approaching closely to paralysis. The patient is scarcely conscious, and can only with difficulty be roused. He seldom speaks and seems wholly indifferent. This is an unfavorable symptom and must be combated early, in order to have any hope of overcoming it.

The two remedies which seem to be especially adapted to this condition are, strychnine and caffeine. Both are here best given hypodermically. Both have already been considered under the heading of the heart. Caffeine has the quicker effect; strychnine is more sustained in its action. Do not give too large doses of strychnine. Remember that when a moderate dose, properly repeated, fails to produce the desired reaction, it is be-

cause of lack of vitality of the system, and it is generally useless as well as dangerous to proceed to heroic doses or measures.

Alcohol—what shall I say of this ancient and much vaunted remedy? The very idea of treating a case of pneumonia without whisky might well cause the fathers to turn over in their graves. I believe it usually is harmful, a paralyzant, an anesthetic instead of a tonic and stimulant, and that it generally lowers the vital resistance, increasing the death rate instead of lessening it. However, good men still differ on this point, and better men than I hold beliefs quite the contrary to mine. Nevertheless, one thing no one can question: its use is rapidly and generally lessening, not only in pneumonia, but in all other diseases. Our modern materia medica has substitute agents, which are better, surer, safer, and less harmful, for nearly all purposes for which alcohol formerly was used.

I have not spoken of the pneumo-bacterin treatment, partly because of a lack of sufficient personal experience to give me positive opinions on the subject. The general trend of professional opinion and practice, however, is toward their increased use, and there can be little doubt that the bacterins will figure more largely in the treatment of this and other diseases in the future than they have in the past or do even at the present time.

At present, the best professional advice is, to use them in addition to, not as a substitute for, the usual treatment, and to use them early, when possible. Their value seems to be in proportion to the importance of the specific infection in the causation of the disease.

Diseases of the Alimentary Tract

By A. L. Benedict, M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—Doctor Benedict has promised us a series of articles upon diseases of the stomach and intestines. This is the first paper of the series. Every physician who has been disappointed with his method of treating "indigestion," or "dyspepsia"—and who has not—should study faithfully the entire series.

AS THIS series of articles, by request of the editor, is of a practical nature, the writer feels justified in omitting many details, both of a scientific nature and such as would be requisite in a systematic treatise but which are readily understood.

Salivary Digestion

The importance of mastication needs no discussion, either as a factor in insalivation or as a preparation for further digestion. On the contrary, the time is ripe for a protest against fletcherism; for two reasons. In the first place, an undue time spent in mastication implies an undue extension of the period of preliminary gastric digestion. While the food cannot be dumped into the stomach in large masses and all at once, a reasonable approach to a definite progress of mechanic and chemic processes in the stomach is physiologically desirable. Otherwise, we have the same confusion of, and interference with, these processes as occurs when one meal is introduced into a stomach containing a previous meal only partly digested.

Secondly: Gastric secretion is reflexly stimulated by smell, taste, and temperature sensations above and probably by the muscular actions of mastication and deglutition. To reduce the food to an insipid, lukewarm gruel before swallowing, overcomes this important excitoreflex complex. While the preliminary entrance of a (faintly) alkaline mass into the stomach stimulates acid secretion, the continued and prolonged admission of such a mass tends to neutralize the acid secreted, as well as removing the excitoreflex stimuli.

We may even question whether a third objection is not of practical moment—the wear of the teeth beyond physiologic provision for growth, such as is present in rodents, and inasmuch as the normal double dentition is not adequate to the demands of the relatively long life of man.

It should be thoroughly grasped, not only as a lesson in physiology, but as a practical clinical guide, that aside from the mechanic preparation of food for further digestion, salivary digestion means just one thing, namely, the conversion of *soluble starch* into *maltose*.

The writer is not given to Italics. But why are these three words italicized? Soluble, because ptyalin does not act upon raw starch; starch, because we must clearly comprehend that salivary digestion has nothing directly to do with proteids and fats, and that, with

a possible qualification, it applies only to certain forms of starch, not to carbohydrates in general; maltose, because ptyalin leaves carbohydrate digestion incomplete.

In a state of nature, all food is taken raw, unless by accident. The saliva of rodents (which animals live largely upon nuts and grains) is much more powerful than that of man and digests raw starch. Whether the saliva of monkeys generally, of other grain- and nut-eating animals, and of primitive man is able to digest raw starch, the writer does not know. This is not merely a confession of personal ignorance, it implies that an extended search has not resulted in finding definite, accurate, and generally conceded statements as to comparative physiology.

The fact that saliva does not digest raw starch is not an important handicap to civilized man. Green vegetables and sweet fruits contain comparatively small quantities of starch. Bread and other cereal and leguminous seed products almost invariably are cooked. Hence, virtually the only considerable quantities of raw starch that are eaten are in the form of bananas, certain nuts, and imperfectly cooked potatoes, radishes, and so on.

Physiologists commonly state that ptyalin digests *boiled* starch. As a matter of fact, the more general word *cooked* should be used. Neither is the limitation of ptyalin digestion to cooked starch a serious handicap. Not only is there ample provision for the digestion of proteids, fats, and some of the minor food principles—such as gelatin—by other organs, but ptyalin is more than duplicated by amylopsin of the pancreas, which ferment not only is much more powerful, but digests starch in the raw as well as in the cooked state. Another reason is that man is gradually increasing his ration of sugars, both in the natural state in fruit, and so on, and as prepared in the free state.

Here may be mentioned the possible qualification as to the limitation of the action of ptyalin to starch. Certain experiments seem to show that cane-sugar is at least partly split, to form the simple hexose, dextrose, and levulose. If this be so, we may suspect that milk sugar is analogously split into dextrose and galactose, and that the maltose itself is split to some degree into two molecules of dextrose. These are not purely academic questions, for the absorption of sugars, except as foreign bodies, seems to be limited to their ultimate cleavage into simple hexoses. However, an invert ferment occurs both in the gastric and the intestinal secretion.

Experiments have shown that, with thorough mastication, ptyalin may convert as much as 100 Grams of cooked starches into maltose at a meal—quite sufficient for the day's ration under ordinary dietetic conditions. How much is actually converted under ordinary circumstances, the writer does not know. Apparently, no standards of the amount of sugar in stomach contents have been established. This is a point deserving attention which the writer hopes to take up later. There are, however, two important facts that may be definitely stated.

There is virtually never an actual failure of ptyalin. The writer never has seen a case nor known of one, even with attempts to find such a case by examining patients having mumps, cancer, stomatitis, and so on. Normally, even with carelessness as to mastication, excess of starch in the diet, and so on, amylopsin will take care of all but negligible amounts of starch, unless in large, raw or improperly cooked and unmasticated masses. Such undigested and practically indigestible masses may cause trouble, mechanically or by bacterial fermentation, but the indication obvicusly is, to correct dietetic errors rather than to make definite efforts to secure more ptyalin or to substitute for it some artificially prepared diastase.

This last statement, though, should not be taken too literally in conditions of disease. There may then be a genuine indication either to force nutrition by artificial aids, or to prevent fermentation by the same means, in addition to enforcing hygienic attention to mastication. Neither should the relative lack of importance of ptyalin digestion be construed as justifying the waste of saliva as a missile by children, the neglect of the proper care of the teeth and mouth, the willful irritation of the mucosa of the mouth by tobacco, the continuous stimulation of the salivary glands by gum chewing, or hasty and imperfect mastication.

Oral and Esophageal Diseases

These are important and logically included in the digestive specialty. But, as they are treated in works on practice, and as the writer has no important additions to make, they will be omitted. The only suggestion tendered is to suspect gonococcic infection in mysterious and exceedingly acute and painful cases of glosso-stomatitis, although these are rare even in perverts, according to various statements.

Owing to its thorough lubrication, the esophagus is relatively immune to heat and

chemic irritants that cause corrosion, both of the mouth, pharynx, and stomach, and to ordinary inflammatory diseases. However, strictures do occur from such causes, and they demand: first, demulcents, notably pure mineral oil; secondly, gentle dilatation with the olivary bougie; thirdly, the consideration of operation, either of gastrostomy or of a radical, local, nature. Otherwise, the principal causes of obstruction are syphilitic and cancerous stricture, the pressure of some extrinsic growth, less commonly tuberculosis. But there are cases of indubitable organic stricture, in which corrosion and traumatism may be excluded, which show no signs of tuberculosis or syphilis, and in which cancer is indicated by the age of the patient and by exclusion, but who survive for many years. The writer has encountered several such cases, but cannot account for them.

Regarding the passage of instruments, it should be remembered that only gentle force should be used, that the existence of arterial disease, marked enfeeblement or any suspicion of aneurysm, and so on, is a contraindication, unless the need is urgent and full responsibility is accepted by the patient. Between the indication for instrumental dilatation and that for operation, the following general principle may be laid down, with obvious implication of diagnosis.

If the patient is young, in good general health, barring inability to swallow food, and dilatation is impossible or requires frequent repetition, or if the patient is limited to a liquid or nearly liquid diet, operate.

Between local operation and gastrostomy, the choice must be made according to individual conditions, with due regard to the difficulty and danger of blind cutting from within the esophagus, of forcible dilatation under anesthesia, and the almost inevitable ultimate leakage from gastrostomy-tubes. If the condition is fatal (as a rule implying cancer), and the occlusion is not absolute, it nearly always is possible to prolong life about as much by the resort to liquid food, pure mineral oil to lubricate, and gentle dilatation, as by gastrostomy.

Theoretically, and sometimes actually, gastrostomy permits of full nutrition and quite a protracted restoration of general health; while any degree of stricture requiring liquid food implies somewhat deficient nutrition—the patient gradually fails but does not literally starve to death. Allowing for the setback of even a brief and satisfactory gastrostomy operation, the usual impairment of digestive and absorptive power and the risk of operation itself, the choice is about even in a series of cases. As an ethical consideration, it should be borne in mind that the choice of a severe operation by a patient in a fatal malady, not curable medically, many times is in the hope of immediate death.

It should be remembered that many cases of esophageal obstruction are syphilitic, even in the absence of a definite history and contrary to probability in view of moral conduct. Innocently contracted syphilis is quite common. Then, too, it is quite possible that the antisyphilitic treatment exerts a favorable action and leads to an erroneous corroborative diagnosis in other granulomata, cicatricial contraction and possibly in some forms of true neoplasm. A negative Wassermann test is not reliable, especially if the patient has previously received mercurial treatment.

Hence, unless a clear exclusion can be made, it is a good plan, before resorting to severe measures or to a hopeless prognosis, to try antisyphilitic treatment. At the risk of presenting a mere personal opinion and one contrary to better authority, the writer would suggest using mercury, rather than iodides, at any supposed stage of the disease, keeping it up as long as it is tolerated, and reverting to it after suspension.

Various Other Conditions

Spasmodic Strictures are of rather common occurrence, with and without frank hysteria. For example. The daughter of a patient with genuine cancerous stricture presented this phenomenon. Spasm may also be a reflex from various lesions of the alimentary canal and its appendages, such as gallstones and appendix inflammation; not forgetting that a spasm may precede or accompany a genuine organic obstruction, at some distant point or in the esophagus itself.

Globus Hystericus generally is regarded as a mere subjective sensation, and does not cause dysphagia, except transiently, while, on the other hand, spasmodic dysphagia is not ordinarily attended by the globus symptom. The two conditions may, however, be more or less typically associated. It may be questioned whether globus is merely a sensation, as there is no reason why there should not be a ring of spasmodic contraction affecting segments of the esophagus in succession.

Either for spasmodic stricture or globus—aside from the ordinary hygienic and tonic treatment, suggestion, nervines, and so on—the main reliance is the bougie, using a large olivary tip. This not only includes the element of suggestion in a sufficiently disagree-

able way to discourage hysteric indulgence, but it acts as a massage of the muscle.

Dilatation, Diverticulum, Ulcer, Tumor, and so on. The diagnosis and treatment of the conditions here named involve radiography and fluoroscopy, the use of the endoscope, and decisions between local and operative measures which must be worked out for each case. Such conditions, except as they are involved in obstruction, are rare, and it is impossible to discuss them satisfactorily within the limits of this series.

Esophageal Rheumatism. While pain extending in a vertical direction in approximately the midline of the thorax may be caused by a great variety of affections, it is well to remember that dysphagia, not amounting to actual obstacle to swallowing, with a definite streak of fiery pain corresponding to the esophagus, either with distinct rheumatic symptoms in other parts, or in a patient with a rheumatic history, or rarely without such suggestive associations, may indicate esophageal rheumatism. Salicylates and alkalis, especially copious doses of sodium bicarbonate, if the urine is strongly acid (more than 75 degrees decinormal by the phenolphthalein test, as for stomach contents), will give relief if the diagnosis is correct. The throat may be sprayed with a 5-percent solution of salol in pure mineral oil, while 1-Cc. doses of oil of wintergreen may be given, three or four times a day, with as little water as possible, so as to permit a local effect.

Confusion With Other Affections. Deep-seated pharyngitis may lead to the diagnosis of esophageal stricture. Applications of a 5-percent solution of protargol generally will give relief in acute cases or in acute exacerbations of chronic cases. Tonsillar inflammation, with sagging of the tonsil into the deeper portions of the pharynx, a fishbone transfixing the tonsil or other foreign body or mass of caseous or calcified material in a tonsillar crypt may cause the same confusion. Treatment is obvious.

Hiccough and Aerophagia

These two neuroses represent different degrees of the same inspiratory reflex, the latter term being applicable when the negative pressure in the thorax leads to dilatation of the esophagus with an appreciable amount of air, which is subsequently expelled; the two phases alternating. Ordinary hiccough may be due to irritation of local origin, as from hasty swallowing, swallowing too large a bolus, swallowing too dry food, and so on. It is characteristic of alcoholic intoxication. As a reflex from gallstones and various other deep-seated lesions, or as the expression of a neurosis, it may be protracted and assume serious magnitude.

Anodynes, general anesthetics, faradization, galvanization, high-frequency current, tongue traction, constriction of the thorax, to prevent diaphragmatic action as far as possible, cocaine to the throat and nostrils, hot-pack, and hot enemata are among the variety of methods proposed for its relief. Sometimes no treatment succeeds.

Aerophagia—which must not be confused with the mere expulsion of gas from the stomach—is more typically a hysteric neurosis, and, while one may, apparently, find a source of reflex excitation, such as nasal polypi, eye strain, movable kidney, and so on, or may discover some general social or domestic cause of hysteria in general, the removal of the apparent local cause is, in the writer's experience, rather apt to prove unsuccessful and that of the general underlying condition difficult.

Nerve sedatives and the use of the esophageal bougie, as for spasmodic stricture, are helpful; but if the case is at all obstinate the real treatment must come from the patient, after a full explanation of the condition. For instance, the patient must understand that the trouble is a nervous trick and, if the patient knows anything about horses, it may even be worth while to state that it is precisely the same thing as "cribbing."

Fortunately, for convenience in directing treatment, aerophagia is one of the symptoms that usually does arise when the physician is summoned or consulted at the office. Fortunately, too, it virtually never assumes the serious degree of hiccough in the ordinary sense. The patient's attention is called to the volume of air expelled, and it is pointed out that no such amount could be expelled from the stomach, and that the inspiration and expiration (esophageal) of air is intermittent, showing that the air is alternately drawn in and expelled. While auscultating over the stomach for his own diagnosis, the physician tells the patient that the air is not heard entering the stomach (although, very rarely this may happen), and it is explained how the inspiration with closed glottis draws air into the esophagus.

After some repetition of explanations, coincident with the phenomena observed, the patient comprehends the rudiments of the physiologic process involved and can be trained to open the glottis (as by trying to breathe deeply and regularly with the mouth

open), when the esophagus is not inflated. With this detailed explanation of the mechanics of the process, training in respiratory hygiene and the realization that the whole condition is neurotic, the patient usually can be taught to control the reflex. Nevertheless, failure may occur in obstinate, stupid, and markedly hysteric patients.

Mechanotherapy in General Practice

By Harold Hamnett, M. D., Stillman Valley, Illinois

THAT there is an increasing demand on the part of the laity and a decided desire among medical men for increased knowledge and application of mechanotherapy in the treatment of bodily ailments, is very little doubted. The tendency of our modern city business life makes it imperative that something beside drug administration and hygienic measures be used in treatment of overfed, underworked, nerve-diseased bodies met with in everyday routine practice. The sad phase of the whole situation is evidenced by the inability of physicians to prescribe definite and suitable muscular exercise in instances where it is indicated; and such dire lack of ability is directly responsible for the existence of a large number of socalled "physical-culture experts," who prey upon the unwary people in quest of relief.

I am fully convinced that there is a field for this efficient and natural method of treatment when in the hands of the right men; and those men should be medical men, too. And when physicians generally take unto themselves a complete or even only a working knowledge of anatomy and physiology of exercise, as viewed from the standpoint of physical education, there will be less criticism from lay people, better results from curative effort, and less liability of injury being wrought by inefficient and untrained "physical culturists," many of whom attempt treatment of ailments that belong alone to the educated medical men.

Commonly Suggested Forms of Exercise

"I believe you should walk more, or you might try riding horseback or buy Indian clubs and swing them; maybe that will make you feel better"—this usually represents the extent of the doctor's advice to his patient when convinced of the need of added exercise.

As to walking, that amounts to very little as an exercise; it will take you out into the open air, to be sure, but puts the burden of work upon the leg-muscles, which do not need it at all. Horseback riding is the lazy man's means of inducing a reduction of avoirdupois or securing increased skin activity, the horse doing all the work but getting no credit. The last suggestion—Indian clubs—is as nonsensical as the other two forms, because very few persons know anything about the proper use of clubs or dumb-bells, while the effect at best is very small.

It has taken a long time for members of the medical profession—many members, surely—to recognize the value of nature's method of maintaining a vigorous and healthy body, and that there cannot be a maintenance of or a return to a normal condition unless there is present vitality, endurance, and a firm musculature. This work is finding a larger place in the treatment of numerous ailments every day. Physicians are recognizing it as a potent factor and one to be reckoned with in their therapeutic service.

Medical Gymnastics

The term "medical gymnastics" refers both to passive and active work; the passive work being that of massage, and the active work that of body movements executed by the patient himself.

Many medical colleges are rapidly recognizing the possibilities of this "new old" idea, and it is finding its way into the course of instruction and study of the larger and advancing institutions.

Massage has been in vogue in many of the older countries for many years, and with a record of undoubted value. For instance, it was in use among the Chinese as far back as 3000 years, and the first knowledge of their work was given to us by the French a little over a century ago. The Japanese, Hindus, and Persians were adepts in its use, as were also the New Zealanders, while the people of the Sandwich Islands are using it to cure ailments in a crude, yet, quite effective manner.

Hippocrates, the Greek physician, recommended massaging very strongly and applied it himself, saying of it that "friction can relax, brace, incarnate, and attenuate; the hard

friction braces; the soft relaxes; much attenuates, and moderate thickens."

Herodi us, the founder of medical gymnastics and the teacher of Hippocrates, was a strong advocate of this mode of treatment. Julius Cæsar made much use of it, by having himself pinched all over daily for neuralgia. Pliny, who was troubled with chronic asthma, is said to have been "rubbed" in order to gain relief.

Celsus, the greatest and most eminent of all Roman physicians, was familiar with its benefits and employed it extensively to relieve headache and to restore surface circulation in fever. He said: "A patient is in a bad way when the exterior of the body is cold and the interior hot, with thirst, and the only safeguard lies in rubbing." Galen gave it his recommendation. Paracelsus, of Switzerland, 400 years ago used and taught massage. For a 200-year period France made much use of it, as did also the surgeons of England in the early part of the last century in cases of strains and joint injuries.

Intelligent Massage

With massage, the art of administration of muscular exercise should (and really does) go hand in hand. Of course, there are some socalled "masseurs" whose efforts at massage are deplorable and who give nothing more than indiscriminate and meager rubbings. The same is true with regard to administering physical exercise, there being no (or but little) understanding of bodily ailments influenced by it, and even less of ability to give intelligently the needed work. What I really have in mind is that accomplishment and efficiency that enables the medical man to appreciate the abnormal physical conditions amenable to muscular movements properly given, and a working knowledge of what to give to obtain the best benefits. Also, it is imperative that he know when and where to begin and when to stop.

It would be just as reasonable for a physician to tell his patient to go to a drugstore, take the first bottle he sees and swallow some of its contents, as it is for him to give directions to his patient for exercise, leaving the latter to depend alone upon his own knowledge and ability.

Essentials for Physical Therapy

Then, what is needed to receive an intelligent knowledge of this important phase of the "new materia medica?" This is my answer: It is necessary—

1. To know the body musculature, macroscopically and microscopically.

2. To understand the mechanics of each muscular group and the individual working-muscles.

3. To recognize the need of physical training or medical gymnastics.

4. To be able to know his "mechanotherapeutic materia medica," that he may prescribe bodily movements with as much detail and painstaking accuracy as the most conscientious physician does from his drug list.

5. He must have knowledge of the physiology of exercise, and should *be able* rightly to oversee it, even though it be referred to a person not a medical graduate.

Where to Get Instruction

As a basis for beginning, I might say that a fairly good foundation was laid about sixty years ago by Mr. Robert J. Roberts, of the Boston Y. M. C. A. (and who, by the way, is spoken of as the "father of Y. M. C.A. physical education"), who said that all exercises should be: (1) safe; (2) short; (3) pleasing; (4) easy; and (5) beneficial. These demands are all applicable to the four phases of physical training; namely: (1) corrective; (2) hygienic; (3) educative; (4) recreative.

The use of muscular exercise as a curative or preventive measure requires a fair understanding of the method of administration and the knowlege of the reasons why specified movements are given. Otherwise it loses its value as an adjunct to the therapeutic equipment of the physician.

The need of the modern business man is not that he possess a giant physique or enormous muscular strength or sinewy muscles, but that he have stamina and vitality and endurance sufficient to enable him to stand the fearful nervous strain imposed in his mad pursuit of a livelihood or the rolling dollar.

The altered living-code of the human race of today—at least that portion of it called the urban population—makes it imperative that some means be resorted to to offset the inroads on health of those persons sedentarily employed.

"By the sweat of your brow shall ye earn your bread" is the edict given forth in the biblical times; and it is a good one, too. There are multitudes who eat the bread without the giving forth of any perceptible perspiration, but who also fail to enjoy it. The human body needs to be kept well and healthy, as originally intended by its Maker; and, since we are denied the privilege of being "hewers of wood and drawers of water," something artificial must be substituted.

And right here is where the rightly equipped medical man fills up the gap.

Factors in Physical Deterioration

When we stop to consider that everything is being done today to save applying muscular energy by installing machinery and electrical devices, we may in a measure realize the opportunity confronting the people to undergo physical deterioration. There are the telephone, the telegraph, elevator, messenger service, street-car, automobile, wonderful, almost human, farming implements, gas as fuel instead of wood, electricity applied in every conceivable manner, and the unnumbered muscle-saving devices extending to shops, factories, foundries, rolling-mills, brickyards, and all the industries. And what results from all this? Less demand made upon the musculature on the part of the male; hence, fewer foot-pounds in real work done, with, consequently, less of physical development.

There is that high degree of deterioration and impairment of body-functions because of all this modernism, that the general health suffers through loss of that body- or tissue-tone necessary to the maintenance of organic equilibrium; and before the individual realizes it he is over the crest and on the downward road; or, the demand for muscular work is so greatly lessened as to favor the piling on and accumulation of fatty tissue, which, unless checked or taken care of in some way, eventually assumes pathologic proportions.

Surely, the enlightened and up to the minute physician realizes that drugs can play a very minute part in the treatment of such conditions and that nothing will suffice except the return of all organs to their normal functioning; and that, where physical exercise is indicated, it will have a most telling and pleasing effect in due time.

Physical Therapy in Disease

It is possible to produce gratifying results in many pathologic conditions. The writer once reduced the abdominal girth of a man exactly 11 inches in forty days, giving forty-one treatments of massage and carefully prescribed physical exercise. The weight of persons is reduced by from 10 to 50 pounds; and this not only means the loss of surplus flesh, but a strengthening of the body-tissues, a cleaning out of the sewage, better skin activity and color, improved bowel action and circulation giving more efficient service.

After all, what is to be done to get the coveted results?

The ideal way, and the one I employ when the necessary equipment is at hand, is as follows:

Get a complete history of the patient and his family, particularly with reference to whether of rural or urban birth and life. The usual examination, by inspection, palpation, percussion, and auscultation. In getting further data for guidance, we may secure girth, lengths, breadths, and lung capacity. The external measurements usually mean very little and afford us but a slight clue. Anyhow, we might measure a dead body and get similar data; but, the vital and telling figures can only be acquired by a record of the strength, endurance, and vitality of the patient.

How is this end to be secured? A power-recording apparatus of considerable bulk is called the dynamometer (strength or power measure). This machine makes possible an accurate record of the actual strength and vital qualities of the large muscular groups and those muscles working largely independently, the results of muscular effort being recorded and shown upon a dial, coming directly through a column of mercury. Thus, such a result gives to you a knowledge of what the individual can do; not merely what he "looks" The test is, how many foot-pounds of work can he do as a total in this uniform and entire test.

After acquiring all of this information, to what use can it be put? Charts can be made (or bought ready made) on which it is possible to record graphically the measurements, including weight, lung capacity, and strength tests, by setting down the figures in their proper spaces and then platting the chart with tracings going from figure to figure. The nearer normal an individual is, both in measurements and the strength tests, the more horizontal will be the platted line; and, conversely, the more abnormal he may be in these, the more zig-zag will be the charted line.

To carry out this work scientifically, the prescription of exercise should be made up according to the physical deficiencies upon the platted chart. These charts, by the way, are made up as the average of 10,000 measurements made upon men of the same age and are readily and fairly applicable to the average 18 year old person or to any other age up to 40 years.

About once each month new measurements and strength tests should be given, to find the progress made. If "O. K.," let it continue; if wrong or inadequate, then a read-

justment of the prescription should be made. By replatting the chart with red ink, to indicate the second examination, and with blue for the third, and so forth, a compact picture showing the progress made is at hand.

Iodine in the Treatment of Tuberculosis

By H. J. Achard, M. D., Asheville, North Carolina

IF THE distrust of empiricism and the demand for laboratory approval which arose, especially in the Vienna school, in the second half of the nineteenth century brought forth as their first fruit a therapeutic nihilism which, most fortunately, never found widespread adherence among general practitioners, the same underlying exact and scientific methods of research more recently have become the agents vindicating the results of empirical research in many unexpected ways, and, in addition, have restored to scientific credit and approval remedies, upon which for many years, practitioners had depended in their clinical work, despite the fact that the same had been frowned upon and decried by laboratory investigators and by theorists.

The Restoration of Iodine

One of the remedies of this category is iodine. Introduced, in 1829, by Lugol (in the form of a solution that still bears his name), for the treatment of "scrofula," this halogen has been administered, especially in glandular (scrofular) affections and in syphilis, with more or less success and approval, even in the face of the many instances of iodine intoxication (iodism) that occurred. The many combinations and modifications of iodine that have been, and constantly are being, proposed bear witness to the favor with which this drug is regarded; but also to the difficulty encountered in obtaining the desired results free from undesirable by-effects from its administration.

I will not take up space with a review of the quite extensive literature upon the subject, however great the interest attaching. Suffice it to say that research in the most recent years not only has afforded us an explanation of the action of iodine (at least in infectious diseases, and more particularly in tuberculosis), but these labors also apparently have aided in solving the problem of the best form of administration. While other clinicians may prefer solutions of iodine plus iodide of potassium, or perhaps one or the other of the modified iodine preparations on the market, as presented in so many forms by the manufacturing chemists of Germany, I, personally, have seen the best results, with the least frequency of iodism, from the use of iodized calcium. It seems that that preparation is the most useful one which supplies the iodine in a form in which it is most readily liberated, because, apparently, the iodine is most effective therapeutically in the nascent state.

Iodine as an Antiseptic and Disinfectant

Recently the decided antiseptic and antibacterial action of iodine has led to its general use in surgery, not only as a disinfectant for the field of operation and for the hands of the operator, but also for application to infected wounds, to inflamed surfaces (tuberculous peritonitis), to abscesses, bone and joint disease, and the like. Its value in these conditions depends upon its marked selective affinity for, and destructive action upon, a large number of pathogenic organisms, while it does not possess this affinity for blood-cells.

While thus the efficiency of iodine externally as an antiseptic is well established in surgery, it has not been found possible to introduce iodine into the blood in a free state, and in sufficient quantity, to act as a disinfectant, without setting up those disagreeable manifestations of iodism that in extreme cases might even become dangerous to life. The principal difficulty hitherto has been to find a preparation of iodine suitable for internal application that would not cause irritation or would not form iodides in the organism, the latter dissolving only with difficulty.

The Experiments of Curle

In reporting his experiments in this direction, David Curle (*Practitioner*, Dec., 1912, vol. 89) points out that potassium iodide, while extremely rich in iodine (containing 75 per cent), dissolves in its own weight of water, and in consequence is rapidly absorbed into the blood and quickly diffused. Unfortunately, these favorable properties are counterbalanced by the fact that potassium iodide, as a salt, is not an antiseptic and that its iodine content can become germicidal only by being set free. The problem, therefore, that presented itself was, how to set free the

iodine from its potassium salt and, yet, avoid iodism.

Potassium and iodine have an intense affinity for each other and their union is so close that dissociation does not occur even by heating beyond redness. Moreover, potassium is capable of uniting with three times the amount of iodine present in potassium iodide, the resulting compound being the triiodide. If, therefore, potassium iodide and free iodine are present together in solution, the potassium iodide will prevent the iodine from being vaporized.

In order to liberate the iodine from its close union with potassium, Curle uses chlorine as a reducing agent. Both iodine and chlorine are disinfectants, and the by-product of their interaction, potassium chloride, is innocuous; in fact, a small amount of this latter salt is essential to maintain the kinetic energy of the heart. In this reaction, the potassium, which has a greater affinity for ozone than for iodine, unites with the ozone that has been formed from the oxygen of the air by the hemoglobin, and thus the iodine becomes available by being set free. Curle has found that 10 grains of potassium iodide yield, at the end of four hours, 3 grains of free iodine, with 6 grains of potassium iodide remaining to keep it in a solution; and this fluid is germicidal.

The tendency to iodism is counteracted by the salivary glands and by the action of the ozone in the blood. Since iodine is liberated more rapidly in acid than in neutral solution, a diminished alkalinity of the blood may cause iodism; which, however, disappears under large doses of sodium bicarbonate. In some persons, an idiosyncrasy to iodine exists, which renders it advisable not to prescribe this drug at all in their case. In another class of persons, the administration of iodine is followed by a rapid, small pulse, pyrexia, loss of appetite, headache, and depression. In these also the drug had best be avoided.

In practice, Curle prescribes 30 grains of potassium iodide, this being the amount that can be transformed by the blood into an actively antiseptic solution by virtue of the limited amount of chlorine in solution in the circulation. He gives potassium iodide in conjunction with from 10 to 20 grains of potassium bicarbonate dissolved in a copious draught of water, to be taken after breakfast.

Formula for the Chlorine-Water Used

The chlorine solution, as here employed, is made by mixing, in a dry 24 ounce bottle, 60 grains of potassium chlorate in fine powder, 120 minims of strong hydrochloric acid, and, after stoppering and gently swirling until effervescence has ceased, adding cold water, little by little, to make up the 24 ounces, corking and violently shaking the bottle after each addition of water, thus dissolving the greenish chlorine fumes filling the vial.

Four hours after the dose of the potassium iodide taken after the midday meal, 1 ounce of the foregoing chlorine water is taken in lemonade, a second ounce is taken two hours later, and a third two hours after the second dose, and soon after the evening meal. If the patient can bear it after the first day, a fourth dose may be taken, or else the three doses may be made slightly larger (say, 1 1-3 ounce each). For children, hydrogen-dioxide solution may be used as a reducing agent in place of the chlorine, to the taste of which latter they object. Even under the daily repetition of this dosage of potassium iodide, iodism does not occur.

Concerning his clinical experience with this treatment, Curle records very satisfactory results, especially as regards improvement in the conditions in pulmonary tuberculosis complicated by mixed or secondary infection.

"Sterilisatio Magna" in Tuberculosis

Whether consciously or unconsciously, therapeutic endeavor always has been directed toward the destruction of the causal agents of disease. The modern means aiming at this end are embraced under the name of chemotherapy, which endeavors to produce a *sterilisatio magna* of the infected organism.

As yet the means by which we can secure such a complete destruction of pathogenic organisms are very few. Naturally, we think of mercury, and of arsenic in the form of salvarsan, in infection with the spirocheta pallida; of arsenic, in the trypanosoma diseases; of quinine, in malarial diseases. In tuberculosis, iodine, creosote, ichthyol, cinnamonnic acid, besides many other remedies have been employed—without the desired effect, it is true, but, yet, we now know, with a considerable degree of reason, for those agents undoubtedly are capable of aiding the organism in its task of destroying the tuberculous virus, in producing an autosterilization.

The resistance of the organism against the tubercle bacillus, which is sufficient to protect most people against tuberculous disease although they have acquired an infection, is a rather complicated process. The re-

searches of the last few years have shown that neither the humoral resistance postulated by German scientists nor the cellular resistance (phagocytosis of Metchnikoff) is sufficient to explain the facts, and it is largely owing to Wright's investigations that the problem has been elucidated.

The uninjured tubercle bacillus, during its life-cycle, secretes into the tissues metabolic products that are toxic. This bacillary toxin, together with other substances that are soluble in the tissue fluids, forms a mixture which may be called the "body tuberculin." This substance differs from Koch's old tuberculin by the absence of the culture fluid. The body responds to the presence of this toxin by forming antibodies, or reaction-products, namely, antituberculin, which neutralizes the toxin; and in this manner the results of the presence of tubercle bacilli are counteracted.

Against the tubercle bacillus itself, the first defense of the body lies in the lymphocytes which, through active chemotaxis, collect around the invading tubercle bacilli. These lymphocytes carry a fat-splitting ferment capable of dissolving the waxy fatty capsules of the bacilli, thus liberating and throwing into the body-fluids the proteids of the bacillus itself, which thereupon act as antigens, that is, they stimulate the generation of reaction-products of the nature of amboceptors. Then, in consequence of the action of the amboceptors, a gradual breaking up of the bacilli, by bacteriolysis, occurs, and eventually they are absorbed.

In this connection, it must be kept in mind that the amboceptors are of various kind, corresponding to the various constituents of the tubercle bacillus, each of which bacillary toxic constituents acts as a "partial antigen" and is neutralized, or opposed, by its own specific partial amboceptor.

Empiricism Vindicated by Science

This brief description of the mechanism of organic defense against the invasion of tubercle bacilli aids us in explaining why certain substances that once were in vogue and in great favor in the empirical treatment of consumption actually proved effective. Thus, it can be shown that the derivatives of creosote detoxicate the metabolic products of the tubercle bacillus and that iodine stimulates lymphocytosis, that condition of such great importance for the breaking up of the waxy-fatty capsules by which the tubercle bacilli are protected against injury.

According to Rothschild (*Deut. Med. Woch.*, 1913, No. 25), the best form of chemotherapy of tuberculosis consists in the appropriate administration of iodine. It is the triumph of true empiricism, which has always insisted upon the value of iodine in tuberculosis. The deliberate systematic employment of the drug in this disease we owe to the Italian school.

Lymphocytosis the Keystone

The administration of iodine, whether this be internally, subcutaneously or by inhalation, invariably is followed by lymphocytosis; a condition, as already pointed out, constituting an important means of defense on the part of the organism against infection with the tubercle bacillus. When, through their lipolytic (fat-splitting) ferment, the lymphocytes have acted upon the waxy-fatty capsules of the tubercle bacilli, the latter are so injured that they no longer can repel the phagocytes, but, rather, actually attract them, through what technically is known as chemotaxis; and then the invading microbes are engulfed and digested, and as a result their various proteids are set free.

Solis-Cohen was the first investigator to observe that in a tuberculosis that is taking a favorable course lymphocytosis is present. Thus, a decided phagocytosis is a necessary occurrence, and Rothschild claims that sputum-phagocytosis is an important index for prognosis, since phagocytosis is the end result of the process begun by the lymphocytes; for, eventually the broken-up tubercle bacilli are phagocyted and destroyed. Solis-Cohen has shown the value of iodine in a series of cases in which its administration was followed by recovery. In the patients who did well, the favorable progress could be checked by the increasing phagocytosis of tubercle bacilli in the sputum, less and less being found extracellular.

For the problems of chemotherapy, according to Ehrlich, the old dictum, that substances can act only in solution (*corpora non agunt nisi soluta*), has to be modified so as to read, *corpora non agunt nisi fixata;* that is to say, only those substances can exert a destructive action upon pathogenic microorganisms that have for them a certain attrac tion or affinity and tend to fix them.

Chemical substances that are thus attracted to the bacterial cell are designated as parasitotropic. In order to exert their destructive action upon the invading parasites, it is necessary, of course, that the chemicals in question come in contact with them. While this is a simple matter in, for instance, malaria, in which the infectious virus is found in the circulating blood—and while

thus the prompt effect of quinine finds a ready explanation—conditions often are quite different, and especially in tuberculosis a *therapia sterilisans magna* presents unusual difficulties.

In spite of many assertions to the contrary, it has been shown definitely in a great number of exact experiments that tuberculosis is not usually a bacillemia and that tubercle bacilli are only exceptionally found in the circulating blood. Moreover, the tuberculous focus being excluded from the circulation by obliteration of the contained blood and lymph vessels, remedies that are administered in the hope of obtaining a direct germicidal effect are not usually carried into the tuberculous focus, and consequently do not come in direct contact with the tubercle bacilli. Yet, a chemical which is to destroy the tubercle bacillus, should be one, it would seem, that will enter readily into the avascular tuberculous lesions and, if possible, pass into or accumulate in such tissues more than in normal tissues.

As a matter of fact, it has recently been shown by H. Gideon Wells, of Chicago, that iodine is taken up by lymphatic tissue primarily and also by tuberculous tissue, and that it accumulates there to a greater extent than in normal tissue. Unfortunately this element does not seem to be stored up in excess in such tissue, being eliminated upon cessation of the administration of the remedy. Still, the fact that tuberculous tissue exerts a special attraction for iodine is of value.

The Selective Action of Iodine

This "almost selective" action of iodine upon the tuberculous focus is explained by Cantani by his observation, that iodine acts directly upon tuberculin by neutralizing the pyogenic toxin, but leaves the other toxins unaffected.

We have seen that in the tuberculous organism a substance is formed which may be called the body-tuberculin, and in so far as this produces fever and other disturbances, unless neutralized, the favorable effect of iodine upon the fever of tuberculous persons is explained. This action of iodine was first pointed out by another Italian observer, Cervello. This claim was supported by an observation of Cantani, to the effect that tuberculous patients who had been subjected to intensive iodine treatment did not react with fever to tuberculin. This antitoxic action of iodine is also manifested in the experience that Bier's hyperemia treatment can be used far more successfully if iodine is administered simultaneously.

These important studies of the action of iodine upon the tuberculous organism justify its extensive administration in tuberculosis, except when it gives rise to iodism and leads to an excessive stimulation of the bronchial mucosa.

Which Is the Best Form of Iodine?

The form in which iodine is administered may vary within some wide limits; however, the intravenous administration advocated years ago does not appear to have gained many friends. Aside from the ordinary internal administration, the drug frequently is given by inunction and by subcutaneous injection. More recently the combined treatment with tuberculin and iodine has been advocated.

O. Müller, in tuberculosis of glands and in tuberculous pleurisy, employs an ointment having a composition as follows: 9.98 per cent neutral fats, 46.29 percent lanolin, 1.34 percent free iodine, 26.69 percent water, 7.23 percent medicated soap, 1.55 percent sodium iodide, 4 92 percent organically bound iodine.

The Italian surgeon Durante has advocated, since 1876, the hypodermic use of iodine, especially with the addition of guaiacol, which latter lessens the pain. He claims for the drug the first place in the treatment of lymph-gland tuberculosis. The best results are obtained in torpid forms of tuberculosis and in surgical lesions, while in phthisis the results, according to him, are not uniform; being better in incipient cases, while sometimes bad in advanced ones.

Cantani administers iodine subcutaneously in the form of the following solution:

Iodine, c. p.	Gm. 1, 2, or 3
Potassium iodide	Gm. 9
Distilled water	Gm. 25
Glycerin, c. p., enough to make	Gm. 100

Of this, 1 cubic centimeter (15 drops) is injected daily for ten or fifteen days; 2 cubic centimeters daily for fifteen days; then 3 cubic centimeters daily. These injections are painful. In surgical tuberculosis, they lower the fever, the local symptoms disappear, the exudate is absorbed, and improvement in the general condition is observed.

On the strength of the antitoxic action of iodine, Cantani suggests the combined use of tuberculin and iodine in phthisis.

Bonzani reports the cure of tuberculosis of

the tongue, by means of local injections, for four days, of this solution:

Iodine, c. p.	Gm. 0.01
Potassium iodide	Gm. 0.02
Distilled water	Gm. 1.0

This, in addition to two general injections composed as follows:

Iodine, c. p.	Gm. 0.04
Potassium iodide	Gm. 0.08
Guaiacol	Gm. 3.00
Olive-oil	Gm. 40.00

Jos. Turman recently has reported experiments in which he attempted to obtain an iodine effect limited to the tuberculous focus, by means of a chemical combination of iodine and the proteids of the tubercle bacillus, thinking that the local action would occur through the special affinity of the tuberculous focus for the iodine constituent of the remedy. In his animal-experiments, Turman observed an undoubted favorable action upon guinea-pigs, in that the treated animals survived infection from two to four months, while the controls died after three or four weeks.

Kapsenberg ground tubercle bacilli, in a mortar, in chloroform, enough of the latter being added to yield a homogeneous emulsion. This latter will, on standing, separate into three layers, of which the upper, yellowish, clear fluid probably contains the water- and glycerin-soluble constituents of the tubercle bacilli and possibly also a little tuberculin. This fluid takes up the iodine and yields with it a very intimate combination, capable of exerting an injurious action upon tubercle bacilli. Therapeutic experiments suggest further trials.

Rothschild also strongly advocates the combination of iodine and tuberculin, using the former in the form of Lugol's solution, which he found to act well in combination with tuberculin.

It is of interest to mention, by the way, that pilocarpine, which formerly was frequently employed in tuberculosis, also acts by stimulating lymphocytosis, and that in certain cases it may be substituted for iodine.

These various researches on new forms of uses for iodine in tuberculosis were not made with a view to stimulating their adoption, as yet, but rather to show that this time-honored remedy promises well to come into its own by the very means which formerly were employed to oust it from phthisis-therapy. For the present the forms of iodine which have given us good service in the past may be continued with confidence, and, when definite results have crowned the efforts of the many investigators who are endeavoring to render the iodine treatment of this disease more fruitful, I shall again give an account of their outcome and hope then to be able to communicate even more interesting and helpful data.

The Right To Live

By George F. Butler

I do not know the name they give
To this dear flower beneath my feet,
I only know that it is sweet
And lovely—and I let it live.

I do not fear the student's wit,
But I don't take what I can't give;
I let the meanest creature live,
Since God hath given life to it.

May Science's learned clan request
Great nature's vivisection —I
I feel the knife that cuts, and cry;
They are like me God's image blest.

Electronic Diagnosis

The Electronic Theory in the Interpretation of Disease

By George Starr White, M. D., Los Angeles, California

Director California College of Physical Therapeutics; Fellow American Electrotherapeutic Association

THE intelligent builder knows the material with which he builds, as well as the plan upon which he wishes to construct his building. If we, as physicians, could know more of the development and physiological processes of each organ of the body and then of the body as a whole, we could much more intelligently treat any disease.

It is generally conceded that the human body is an aggregate of myriads of cells, estimated in number at twenty-six million five hundred thousand millions. Each cell, as we now know, has its own function to perform. Each cell is a part of a cell community and works for weal or woe.

The more we study the development of cells, the more we are impressed with what is, electrically, termed *polarity*. (As we have no better nomenclature at our command, we will employ electrical terms in speaking of vital force.) No one can witness cell division by mitosis under a powerful lens without thinking of the appearance of iron filings in a magnetic field.

The Electrical Analogy

As we look at the development of any species of animal or vegetable life, we find that one cell divides into another cell, and that again into another. If there were not some controlling influence over these cells, they would all develop in the same way and the organism would be all of a single tissue, without any differentiation between the ectoderm, mesoderm, and endoderm, or any of the structures developed therefrom.

In our modern way of thinking, the electron is the smallest particle from which the atom is formed, and in turn the molecule is formed from the atoms. Each cell seems to be an electrical entity with positive and negative poles, and that entity is the electron. As these electrons are arranged in a specific manner, so is that atom arranged to have certain lines of force. As the atoms in turn form the molecules it is probable that they, from the arrangement of poles and magnetic fields, are created in a definite internal arrangement according to the arrangement of the electrons. Inasmuch as the molecules form the cell, then those cells would be electrically and magnetically arranged according to the formation and arrangement of the electrons.

As cells divide and develop one by one, they appear to be limited in their development by electrical or magnetic conditions existing in their internal formation. This could be on the order of a multitude of galvanic cells connected either in series or in multiple, so arranged that when the amperage was of a certain degree the voltage would be modified, or conversely. Considering each cell as a great multitude of electric cells, this theory seems plausible.

By this arrangement, when a certain amount of electric force was exerted or a certain quantity generated, the electrons would be affected in such a way that they would form different kinds of structure or different forms of the same structure. In this way we could formulate a reason for the definite manner in which cells develop. Sometimes we have monstrosities or malformations. These might be caused by some electrical change having taken place at the time of development, bringing about forms in one species that are found in another.

If we reason from the supposition that all matter started from a single form of atom or electron, the theory of evolution can be built up entirely on the electronic hypothesis. If, as some physicists think, the electron is always associated with an unvarying unit-charge of negative electricity revolving within a sphere of positive electricity, then all atomic characteristics can be satisfactorily explained.

As the universe is made up of electrical systems and, as many believe, our very atmosphere and form of life is governed by electrical changes in this universe, it is reasonable to believe that the animal body is made up of electrical systems.

The molecule would simply be an aggregation of electric batteries. The tissues in turn would follow in the same order as the molecules, since each tissue is an aggregate of similar molecules. The organs would follow in the same order as the tissues, inasmuch as they are aggregates of the tissues and deter-

mine the character of the work. Now, the system is an aggregate of organs having co-related functions.

Electric Equilibrium and Health

It would hardly be compatible that one entire body were composed of one electric system; rather, on the contrary, it would seem as though the body of any animal were made up of separate electric systems or magnetic fields.

If this hypothesis be correct, the body, to be in health, must be in electric equilibrium. As soon as any one system in the body is in any way deranged so as to cause a change of polarity, that would mean disease in that particular system. In the same degree as that subsystem were deranged, so would the whole system be out of balance. If the polarity of any tissue were changed, disease or unrest of tissue must take place.

During the evolution of matter from vegetable to animal and from animal to human, electrical centers have, apparently, been developed to control automatically the several subsystems, or electric segments.

At first, we have the nucleus of the cell to govern the cell itself, then a system of cells is governed through nerves or connecting wires by ganglia, or small nerve-centers. As evolution progressed, larger nerve-centers governed the subnerve centers, until eventually we have what is called the brain to govern the ganglia, or substations, throughout the organism.

If we accept this theory of electronic unity, it will be much easier for us to conceive the idea that the chromosomes in the cell are an aggregation of electrons representing every other cell in the organism. In no other way can we explain heredity or the laws of eugenics —each species having its own characteristic and number of chromosomes.

There are different polarities in different parts of the body. Some parts of the body are affected more by the negative pole while others are affected more by the positive. If a positively charged part of the body become negatively charged, that part is diseased. If it become neutral, we also have a state of physical unrest.

If there is any way by which we can prove that the body is made up of aggregations of electrical systems or spheres of radioactivity, we shall draw nearer to the etiology of disease as well as its relief.

It has been proved that certain rays of light cause the body to give off more or less electrical force. It has likewise been proved that other rays of light cause sedation. From these proven phenomena, it seems as though the body were composed of radioactive segments and controlled by them. Since different parts of the body give different forms of polar energy, it follows that their spheres of radioactivity vary.

In order to ascertain the polarity of any electric charge, we employ a bar magnet. If the charge be negative, the negative, or south, pole of the magnet augments the charge, while the opposite or north, pole of the magnet would neutralize it. In the same way, we can prove the positive charge of electricity or energy from the body or from any substance.

The Stomach Reflex

In the fifth edition of Dr. Albert Abrams' work on "Spondylotherapy" details of the following new concepts in diagnosis are fully set forth.

Following the teachings of Doctor Abrams, we found that the stomach dulness can be elicited when a horseshoe magnet is so placed in front of the stomach that the lines of energy go off in a straight line to the stomach. This energy given off to the stomach-muscle is powerful enough to influence the stomach when an 8-inch horseshoe magnet is held from 8 to 12 feet away from the subject being percussed.

Instead of the horseshoe magnet, energy from the heart can be used by conducting it through wire, one end of which is placed over the heart and the other over the stomach. The same obtains if the finger from the negative side of the body of another person is pointed toward the stomach. In a less degree, the same effect is obtained by placing one end of the conductor over the seventh cervical vertebra (vertebra prominens) or over other definite areas, and the other end over the stomach region of the same subject or of another subject, provided the subjects are grounded.

If the energy carried to the stomach-walls from the radioactive centers possess polarity, it is inhibited by using only the opposite pole of the bar magnet. (Dulness is dissipated both by positive and by negative poles if the energy be neutral, but if it have polarity the dulness is dissipated with the opposite pole of a bar magnet.)

Electronic Diagnosis

Now we will briefly consider the diagnosis of disease by means of the electronic method. (Before diagnosing any disease by this

method, the patient should have his bowels thoroughly cleansed with a saline purge.)

It has been proven by a great many subjects that one suffering with syphilis gives out a neutral, or isoelectronic, form of energy from the liver, spleen, spine, and arterial system, which will produce gastric dulness. If the patient have no syphilis, no stomach dulness can be conducted from these regions.

If the patient have tuberculosis, the polarity of energy is also neutral and is elicited from the sites of the tuberculous lesions. If the tuberculous lesion be in the liver, spleen, spine or in connection with the arterial system, it might seem difficult to differentiate between syphilis and tuberculosis. One method is, to give the patient mercurial inunctions for several days and then test him. If the lesion be syphilis, all syphilitic reactions will be dissipated. If it be tuberculous, there is no change in the reaction. Another method of proving tuberculous or syphilitic reactions is by using colored screens shedding colored light on the patient. If the lesion be tuberculous, a yellow screen dissipates the stomach dulness. If it be syphilitic, a blue screen dissipates it.

By the electronic method of diagnosis, the site of the original focus of infection by syphilis can easily be demonstrated. This has been proven by anointing the site of the focus of syphilitic infection, thus found, with mercurial ointment for a few days, when all syphilitic reactions disappear.

By this method of diagnosis, the reaction to pus is positive and is elicited from the focus of suppuration. Appendicular disease can be diagnosed when it is impossible to diagnose it by any other method.

In the same manner, we can diagnose carcinoma, as the polarity is negative and the energy is obtained from the site of the neoplasm, even though it is just beginning. These diagnoses have been made many times before operation and proven by the pathologist to be correct. Dr. George O. Jarvis, of Ashland, Oregon, has summarized a large number of cases which have been brought to operation by aid of the electronic tests, and the operations have confirmed the diagnoses thus made.

A Key to the Cure of Chronic Diseases?

By the same method, nearly all infections and chronic diseases can be diagnosed, but those named are among the most important, as they can be discovered in the early stages when by other methods it is practically impossible. Some experiments are now going on which, if proven after a large number of tests to be as successful as they now appear, will give a new method of curing most chronic diseases.

The electronic method of diagnosis and treatment may mean that we have found a method of curing many diseases that have been considered incurable. The fact that the polarity of the radioactive energy is changed proves that we must bring about normal polarity before the disease can be eradicated.

This method has opened up a new field for research in diagnosis and in treatment. Now the etiology of many obscure complaints can be determined and we can see reasons for many cures and for many remedial measures that have been employed empirically. They can now be applied in a scientific way and with a definite object in mind.

The electronic methods of diagnosis have been extensively tried by some of the most trustworthy medical observers. Thus, Dr. E. M. Perdue, who is in charge of the largest laboratory for cancer-research in America, refers to the subject as follows:

"The work of Abrams on human energy is so exact, so scientific, and so true that it is already working a revolution in the practice of the healing art. In our University, instruments of precision have been constructed by which we demonstrate, measure, control, and test the intensity and polarity of the emanation of human energy. These methods have been confirmed by chemical analysis and microscopical examinations of the tumors."

How the Work Is Done

In carrying out this work, the technic must be exact. For some, it is very difficult to obtain the "stomach dulness"; still, by observing certain rules, the average person can obtain it with proper appliances, if he cannot by means of the finger-finger method. The method we follow is that of Doctor Abrams.

We first percuss out the lower border of the liver and mark it with a dermatograph. We set up, as above stated, magnetic or radioactive energy at right angles to the stomach-muscle. We then begin to percuss, and the stomach dulness will generally be observed at once. Bone or celluloid thimbles, loaded with lead, and worn both on plexor and pleximeter fingers will, sometimes, greatly aid in bringing out the differentiating sounds.

For carrying the energy from one point to another, one must use electrode-holders so constructed that only the electrode can come

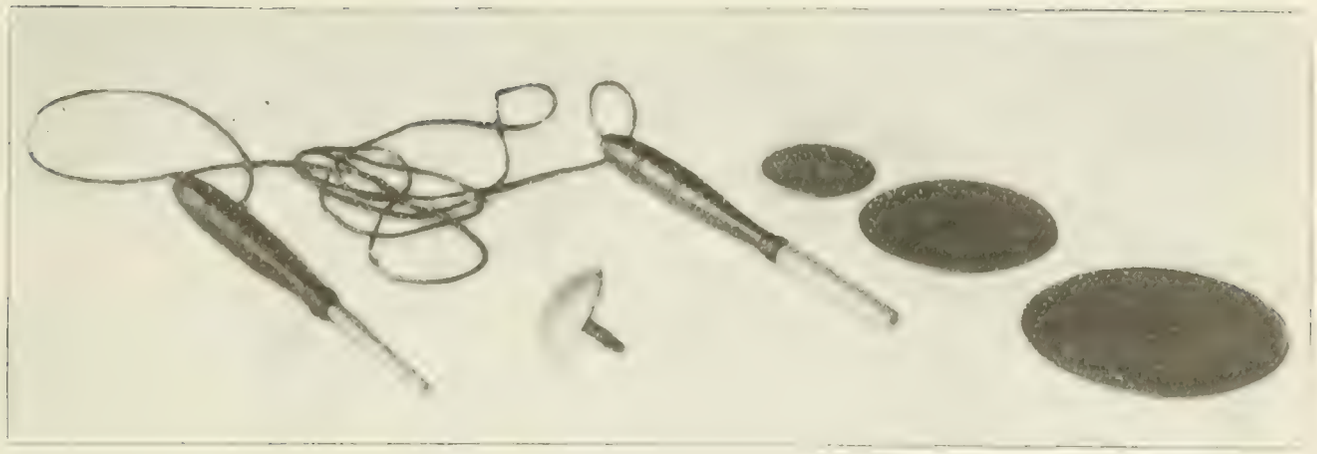

Fig. 1. Showing electrodes used in diagnostic work

in contact with the body. To accomplish this, we have had special electrode-handles made, so arranged that the connection is inside the handle, being insulated in a manner that has been proved to be effectual. See Fig. 1. At one end we use a disc electrode so as to cover a larger part of the body when looking for diseased areas. The other electrode has a small area for locating very small lesions, such as a beginning tuberculous lesion in the lungs or any other locality; an inflamed gland, even if very small; or a beginning carcinomatous degeneration of cells.

We have also invented special electrodes so constructed as to augment radioactive energy. Some individuals radiate much less radio-energy than do others, and some stomachs respond much less readily to ethereal waves of force. Our device helps to overcome these contingencies.*

For eliciting the dulness by other than the finger-finger method a pleximeter that is nonmagnetic is desirable. We have found that the pleximeter shown in Figure 2 is very well suited to this work. The metal part is made of brass or some other nonmagnetic material, bored out in the concavity where the plexor hits it, and that portion filled in with lead. It is all nickel plated.

*The set of energy conductors shown in Figure 1 is made of aluminum and the handles are lined with aluminum. These are now manufactured by the McIntosh Battery and Optical Company of Chicago.

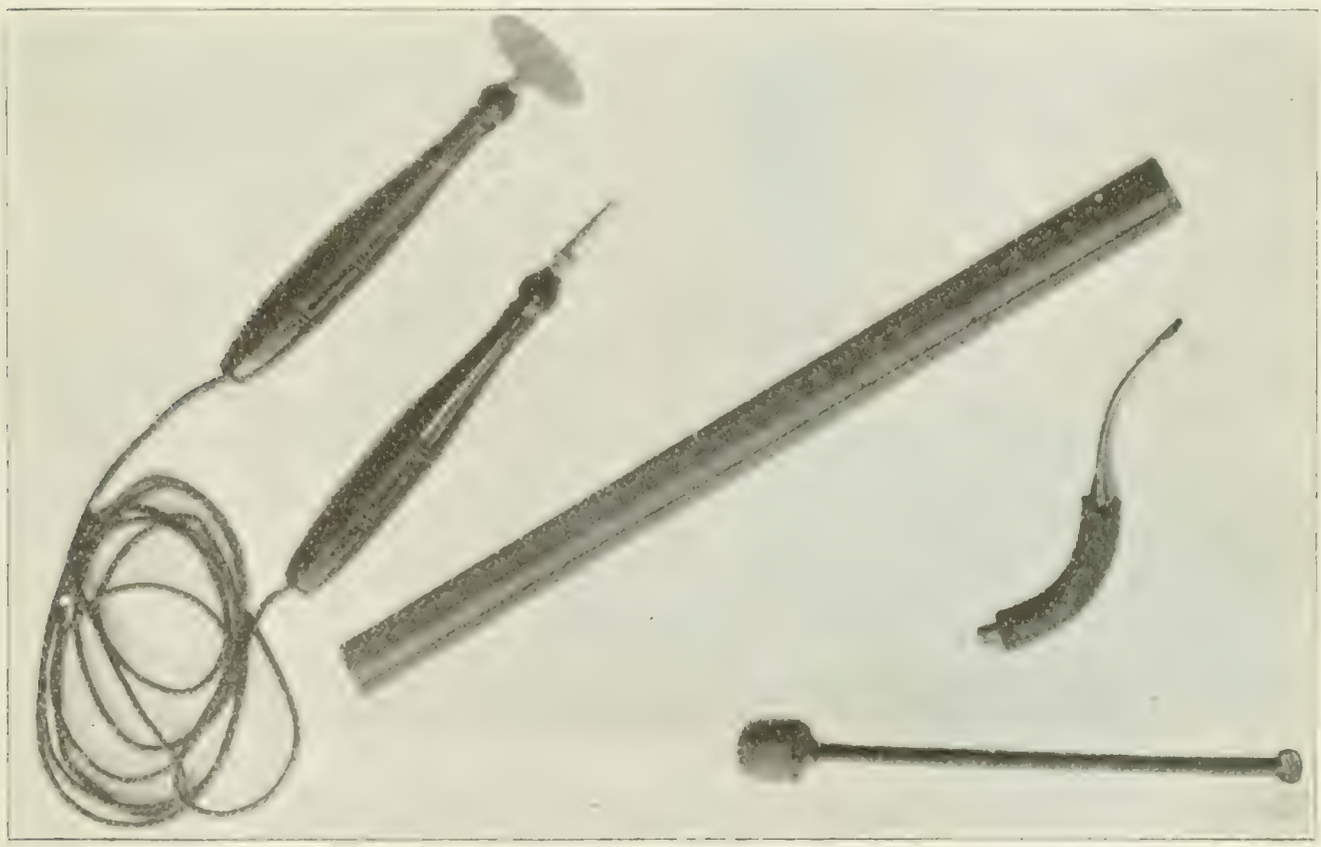

Fig. 2. Electrodes and Energy Measure

and over the portion which comes in contact with the body and the plexor, a special kind of rubber tubing is placed. It will also be observed that the rubber sheath does not come to the extreme end of the metal.

For the plexor, a light device is required. (Fig. 2.) The percussion stroke must be very light. It requires much practice to become proficient in diagnosing beginning lesions.

In Figure 2, is also shown an energy measure. It is a rule divided into millimeters and centimeters, with a groove running parallel with the rule on the side of the gradations. This is used as follows:

Two sets of conducting cords and electrodes are necessary. The pointed electrode of each conductor is placed in contact in this groove. One disc electrode is placed over the neoplasm or beginning inflammatory site and the other over the stomach. This acts as a closed circuit. If the inflammatory process be of a low order, the two points in the groove of the rule must be in contact or nearly so to produce the stomach reflex. If it be of a very acute or active process, the points may be separated from one another. The distance they may be separated and still produce the stomach reflex is recorded on our diagnostic card. From day to day, as the inflammatory process recedes, the ends of these conducting cords must be brought closer together. Thus we can tell whether a tuberculous or other lesion is actively increasing or diminishing in severity.

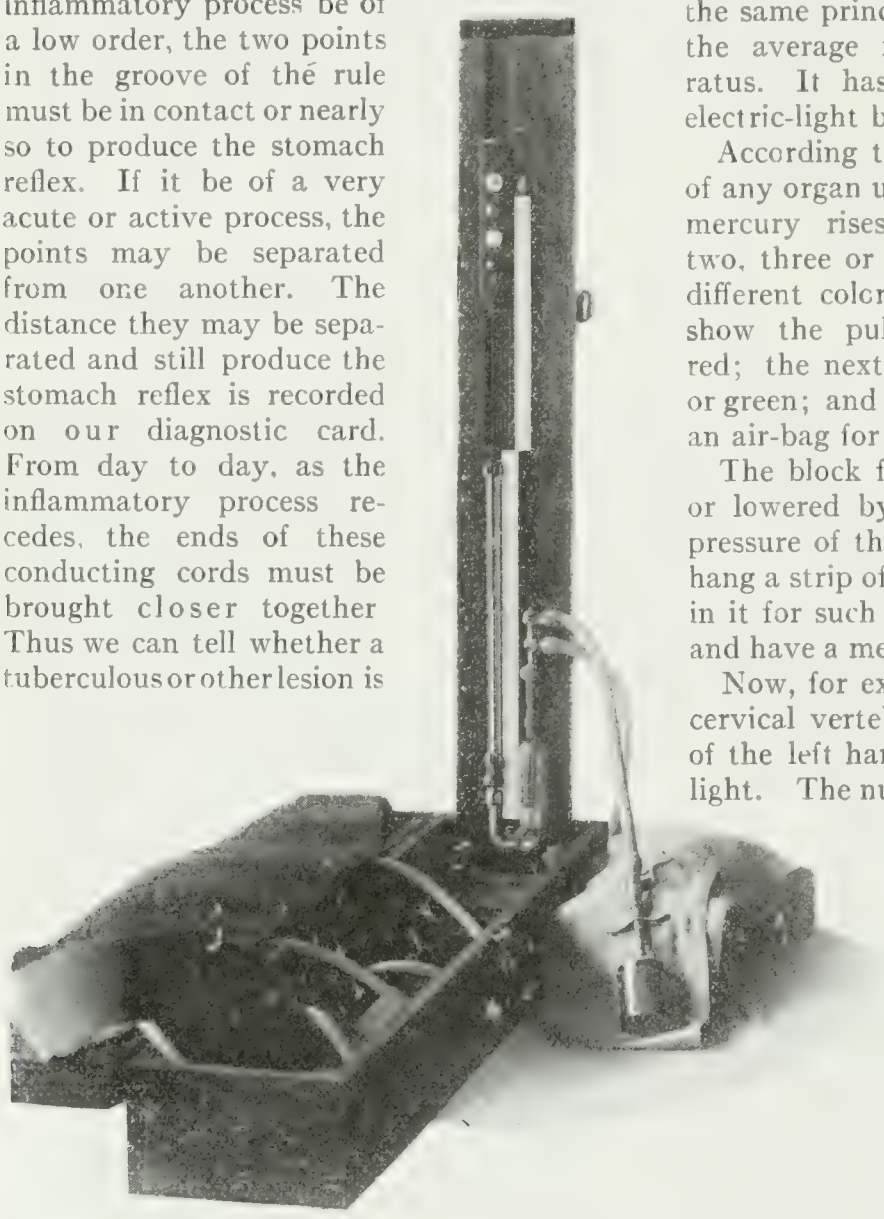

Fig. 3. The Psychophanometer.

Now that we have practically proved that diseased tissue gives off a different energy than the normal, and inasmuch as we are able to demonstrate this, we must find means of changing the electrical energy from abnormal to the normal. When this is done, we shall have effected a cure.

The Psychophanometer*

The psychophanometer (Fig. 3) is a new apparatus for visualizing the effects of human energy. The first apparatus for demonstrating the emanations of human energy by the blood pressure was made and described by Dr. F. M. Planck, of Kansas City, Missouri. He neologized this instrument, psychophanometer. He used a mercury sphygmomanometer with one contact wire and one electric-light bulb to light when the mercury column raised.

The apparatus we have now devised is on the same principle but is more sensitive than the average mercury blood-pressure apparatus. It has four contact wires and four electric-light bulbs.

According to the contraction or expansion of any organ under the air bag, the column of mercury rises or falls, and so lights one, two, three or four lamps. The lights are of different colors, so as easily and quickly to show the pulsations. The lowest light is red; the next above, white; the third, blue or green; and the top one is bright. We have an air-bag for the trunk and one for the arm.

The block for carrying the lights is raised or lowered by a ratchet, to suit the blood pressure of the subject. Along the spine we hang a strip of Crookes' metal with openings in it for such vertebra as we wish to expose, and have a means of covering all the rest.

Now, for example, if we leave the seventh cervical vertebra exposed and point a finger of the left hand of a man at it, the lamps will light. The number of lights will depend upon the energy conveyed. By making all the lights glow and exposing only the third and fourth dorsal vertebra and pointing as before at them, the lights will go out, the number depending upon the amount of energy. If a woman do the pointing, she must use her right hand.

*The instrument illustrated is manufactured by George P. Pilling & Son Co., Philadelphia, Pa.

All these experiments and findings go to prove that the living body has polarity. They open up an entirely new field for research. They prove that the emanations of human energy are an index to the physical condition of the subject. This same human energy can be used to diagnose disease in its early stages better than any other known method. To Dr. Albert Abrams is due the credit for this epoch-making discovery. It is the external counterpart of the Abderalden reactions.

Echinacea: The Vegetable "Antitoxin"

Its Characteristics and Peculiar Therapeutic Effects

By Finley Ellingwood, M. D., Chicago, Illinois

Editor of "Ellingwood's Therapeutist;" and Author of "Treatment of Disease," etc

ECHINACEA, this rare and very valuable remedy, was introduced into the profession about thirty years ago, but eclectic physicians alone gave, at the first, any credence to its remarkable virtues. The statements made with regard to the action of this remedy were so exaggerated that even the physicians of that school, who ever have been willing to follow any suggestion concerning the properties of new drugs, hesitated about accepting them. But, after witnessing repeated wonderful results, the truth grew upon them, until at the present time this agent is used by perhaps one-third of the entire medical profession. However, not entertaining full confidence in it, it is not prescribed as often, nor in as large doses as a complete knowledge of its virtues justifies. Given within the lines suggested, the remedy does no harm, and it fails, probably, less often than any other antitoxic or blood-corrective remedy of which we have any knowledge.

Furthermore, the influence of its action in these fields is entirely different from that of any other remedy, as it produces, from the first, a general sense of wellbeing and improvement that involves all of the vital organs.

Echinacea is positively a corrective of depravation of the body-fluids. The conditions corrected are included under the terms septic, fermentative, and zymotic, or where there is a disturbed balance of the fluids which results in alterations of the tissues. Where pus is formed, especially in general pyemia, where the pus is absorbed, and where there are local cellular and glandular inflammations, it is especially indicated, as we shall mention later on. It is also a most active antidote to organic poisons as found in the venom of serpents and of stinging poisonous insects of every character and of every clime.

The dosage of the fluid preparations which I have used varies from 10 drops in simple cases, every three hours, to 1 dram every hour in extremely aggravated ones. Doses of 1-2 ounce have been given a few times, but I should call 2 drams the maximum. An average dose is 20 drops every two hours or 30 drops every three or four hours. As the remedy is quickly eliminated, frequency sustains the action of each individual dose. In some instances, the effect of each dose can be watched and the time for repetition be determined for another dose.

I have had less experience in the use of the concentration echinacoid; but, so many reliable observers have declared themselves concerning the satisfactory results obtained from this agent that my confidence in it has been established. So many proofs of its action have been made public that the reader, in all probability, will be able to secure the same effects, and with the same promptness, that have been secured from the fluid preparations. The ordinary dose is from 1-2 to 2 grains every two hours, in tablet form, preferably crushed and administered in hot water

Physiological Action of Echinacea

Any toxic effect of echinacea is manifested only after massive doses or in especially susceptible patients, seldom occurring with even extreme authorized doses. These effects consist in reduction of temperature; the frequency of the pulse is diminished; the mucous membranes become dry and parched, and there is a prickling sensation; there is headache of a bursting character; a tendency to fainting is observed when the subject assumes an erect position; the face and upper portion of the trunk are flushed; there is pain throughout the body, which is more marked in the large articulations; there is dimness of vision; intense thirst and gastric pains, followed by vomiting and watery diarrhea are experienced. No fatal case of

poisoning has been recorded, to my knowledge. Even in extreme cases, it is seldom that any undesirable effects are observed.

When half a teaspoonful of the tincture is taken into the mouth, a pungent warmth is at once experienced, which increases to a tingling, and this remains for half an hour after it has been ejected. This sensation is similar to that produced by aconitine, but not so entirely confined to the nerve end-organs. The sensation seemingly results more from a mild nerve-irritant effect. The action much more resembles that of xanthoxylum.

If a small quantity of the tincture is swallowed undiluted, it seems to produce constriction of the throat, a sensation of irritation and of strangulation, always disagreeable, but much more severe in some subjects than in others. The sensation persists for some minutes, notwithstanding the throat be gargled, water be drank, and every vestige removed. It actively promotes the flow of saliva. The warmth and tingling extend down the esophagus to the stomach, but no further unpleasant influence is observed. In a short time, diaphoresis occurs. Continuation of the dosage stimulates the kidneys to increased action. All of the glandular organs seem to feel the stimulating influence and their functional activity is improved. The stomach is strengthened in its function, the appetite increases, the food is more perfectly digested, the bowels operate better, and absorption, assimilation, and general nutrition are materially improved.

Echinacea encourages secretion and excretion, preventing further autointoxication, while quickly correcting its influence in the system if it exists. It stimulates retrograde metabolism more markedly than any other single remedy. It influences the entire lymphatic system, and the condition of the blood is as if the patient had been taking stimulants, liver-remedies, and iron. Sallow, pallid, and dingy conditions of the skin of the face quickly disappear and the rosy hue of health becomes apparent. Anemic conditions improve, with increased nerve-tone.

The effects enumerated, as manifested by its action directly upon the blood, are its most valuable effects. The natural secretions are at first augmented, and, where elevation of temperature, due to any possible infection, exists, the temperature is lowered, the pulse is slowed, and the capillary circulation is restored. It positively and always antagonizes infectious processes. It exerts a peculiar influence over localized inflammatory conditions also, especially if these are attended by blood dyscrasias. It has an important field in adynamic fevers, reducing the pulse and temperature and subduing delirium.

Special Indications

Echinacea is *the* remedy for "blood poisoning," so called. Its field covers acute autoinfection, slow progressive blood taint, faults of the blood from imperfect elimination of every possible character, and from the development of disease-germs within the blood. It acts equally well, whether the profound influence is exerted upon the nervous system, as in puerperal sepsis and uremia, whether there is prostration and exhaustion, as in pernicious malarial and septic fevers, or whether its influence is shown by anemia, glandular ulceration or skin disease.

It is especially indicated where there is a tendency to gangrenous states and sloughing of the soft tissues, where the throat is dark and full, tongue full, with a dirty, dark-brown or black coat; in all cases where there are sepsis and zymosis.

It undoubtedly exercises a direct sedative influence over all of the fever processes, in typhoid fever, cerebrospinal meningitis, malarial fevers, asthenic diphtheria, and so on; for, while it equalizes the circulation, it also acts as a sedative when there is abnormal vascular excitement, and it lowers the temperature if this be elevated, while, if this is subnormal, its singular effect upon the vital forces makes for the restoration of the normal condition. As a sedative, it is comparable in some respects with baptisia, rhus, and bryonia.

Echinacea In Typhoid and Similar Fevers

The action of this remedy as an intestinal antiseptic can hardly be described. It takes first place in many diseases. Its action upon the stomach in many particulars resembles that of hydrastis, while throughout the entire intestinal tract its influence dissipates the causes of autointoxication and promotes a high grade of functional action, not only as to the intestinal glandular organs, but as to the mucous glands as well.

It exercises an immediate influence upon all fevers caused by the persistent absorption of septic material. Typhoid fever, puerperal fever, the fever of pyemia, and in many cases malarial fevers, all are witness to the specific destructive action of this agent upon the germs inducing the fever.

While most prescribers combine some certain sedative with echinacea in infectious

fevers, many observers have learned to look for the falling of the temperature which follows the destruction of the germs by this agent, and thus give echinacea independently of the special sedative. In abrupt infections, the temperature will decline from 1-2 to 2 degrees within a few hours, and will not increase while the remedy is continued.

No such abrupt drops in the temperature are observed as those which follow the curetting of the septic womb or the removal of septic material; yet, it promptly arrests germ development, and evidences of steady restoration from bacterial influence are quite quickly apparent from the action of this drug.

In the treatment of typhoid fever, there are probably thousands of physicians now who do not fail to include this remedy as a basic agent during the entire febrile stage. It is not necessarily continued in large doses, but certain manifestations demand its use for a short time in large doses. Under the use of this agent, if begun early, the temperature seldom reaches a point higher than 103.5 degrees, and that only for a short time each day.

If care with the auxiliary measures is exercised, the course of the fever is limited to fourteen days. In those cases in which the fever continues for twenty-one days (and this point is seldom exceeded), there is no delirium, there is but little nervous excitement, there is no hemorrhage, and there are no sequelæ. The patient recovers rapidly, and often the subsequent good health is better than previous to the siege.

The mortality, where this agent is used, is very low. A number of careful observers have claimed that the giving of this remedy at the very onset of the disease limits the fever to seven days, and that fourteen days is extreme. The blood does not become impaired; the appetite increases, and frequently assimilation is increased to a marked degree; the nerve-force is retained; there is an improvement in the elimination of all organs; there are evidences that ulceration of Peyer's patches has abated; there is no tympanites, and other enteric symptoms abate rapidly; perforation is almost entirely unknown where this agent has been administered.

This is claiming a great deal for one remedy; but, as stated at the outset, echinacea has been found to be a remarkable remedy, and it will sustain a reputation for remarkable results. However, the thoughtful physician will not depend upon this remedy alone, and the associated employment of the sulphocarbolates is urged, together with other drugs having special indications in this disease.

In its action upon septic fevers, it seems to act as a stimulant to nerve-force, those vital forces which are depressed by the infection seemingly being quickly aroused.

I have seen this plainly marked in a case where, from septic absorption after a badly conducted abortion, there was sudden suppression of the urine, with almost immediate evidences of uremia, mild convulsions and delirium. The multiplied and dangerous symptoms made the case an alarming one. After the uterus was evacuated and made thoroughly aseptic, 20 drops of echinacea was given every two hours continuously, extreme heat was applied over the kidneys, and a single dose of an antispasmodic was given, the echinacea being continued alone. After the first day the temperature slowly dropped, the mind cleared, there was gradual restoration of the renal secretion, and the recovery of the patient was entirely devoid of complications.

Having this remedy, and macrotys and gelsemium, to fall back upon, sudden suppression of the urine has lost its terrors to me.

In its early use, more was claimed for it in diphtheria than we now expect of it, and, yet, it still remains an exceedingly valuable medicine. When this remedy, together with phytolacca and iron, is given, the exudate contracts and disappears and local as well as constitutional evidences are plainly apparent. The fever declines, the vital forces increase, mental and physical depression disappear; all in a very natural and rational manner. All ulcerations of the mouth, throat or nose will find an effective remedy in this.

In ulcerative conditions of the intestinal tract, it is in constant use, and in appendicitis it is seldom neglected by those who are familiar with its action. Pus deposits are almost impossible when this agent is given, and as a preventive of this condition it should not be overlooked.

In Cerebrospinal Meningitis and Tetanus

A most remarkable influence has been exercised with the use of this agent in destroying the toxins of cerebrospinal meningitis. Doctor Webster, of San Francisco, was probably the first to call our attention to the value of this remedy. Judging from his personal observations and those made since then by hundreds of our physicians, the action is reliable, persistent, and highly satisfactory. Whenever convulsive or inflammatory conditions of

the brain and cord, depending upon infection, exist, this agent can be relied upon.

I am confident the same rule applies in this case as in the treatment of tetanus; a fact likely to be overlooked, as it may be in other convulsive disorders. This rule is, that there are two dominating conditions to be treated: first, the infection; second, the spasmodic influence exercised upon the spinal centers. This agent antidotes the infection.

For a powerful, reliable antispasmodic in this disease, gelsemium is determining for itself a fixed and permanent place. Our best authorities are now united in the fact that this nerve and spinal sedative has a direct and reliable influence upon convulsive action in this disease, and the two remedies given in conjunction, as they are in tetanus, will show gratifying results. It is Webster's opinion that the remedy specifically reinforces the vascular area concerned in the nutrition of the cerebrospinal meninges. Its influence upon the capillary circulation is not comparable with any other known remedy. It seems to increase the force of the circulation in these vessels, but it also seems to endow them with a certain amount of recuperative power.

Our earlier reports did not show the results of the action of the remedy in tetanus, but in the last ten years the agent has been injected at the seat of the wound, and in some cases the condition has abated without the addition of an antispasmodic. But, in most cases gelsemium has been used, both remedies in large doses in the same manner as suggested above in the treatment of cerebrospinal meningitis, and most happy results have followed in the larger proportion of cases.

Dr. John Herring reported a marked cure of a case of tetanus with this remedy. Doctor Lewis reports three cases, where the remedy was injected into the wound after tetanic symptoms had shown themselves. All the tissues surrounding the wound were filled with the remedy by hypodermic injection, and gauze saturated with a full strength preparation was kept constantly applied. The remedy was also administered in 1-2-dram doses every two or three hours. Another physician has reported the observations in quite a large number of cases where tetanus either had markedly developed or was anticipated. The use of the remedy satisfactorily overcame all symptoms where present, and where none were present no tetanic phenomena developed.

In the diagnosis of this disease, the physician may sometimes confuse septic phenomena with those of developing tetanus, and the cure of the septic conditions may have been taken for a cure of tetanus. This same fact may apply to cases bitten by dogs.

Some Local Uses of Echinacea

It is especially needed in erysipelas, when sloughing and tissue disintegration occur; its local influence being most reliable.

In the pain of mammary cancer and in the chronic inflammation of the mammary gland, the result of badly treated puerperal mastitis, where the part has become reddened and congested, the remedy has done satisfactory service.

In bedsores, fever-sores, and chronic ulcerations, it is exceedingly useful. It is diluted and applied directly; but it is also given internally. It is of much value in old tibial ulcers, in chronic glandular indurations, and in scrofulous and syphilitic nodules and other specific skin disorders. The extract or the fluid extract may be combined with an ointment-base (such as lanolin), in the proportion of 1 part to 1, 2 or 3 parts of the base; this to be freely applied. It can be injected into the sinuses of carbuncles or into the structure of the diseased parts, with only good results. Logan treated with this remedy alone 10 cases of stubborn skin disease of undoubted syphilitic origin. It was applied externally and given in full doses internally, with a satisfactory cure in every case.

When applied to painful surfaces, to acute and painful local inflammations of the integument, or to a painful womb, its pronounced anesthetic influence is soon manifested; while it is of great benefit in preserving freedom from pain during the active healing processes, which are stimulated and encouraged by this remedy. Professor Farnum is enthusiastic over the action of echinacea in overcoming the odor of cancer, whether in the early stages or in the later ones of the development of this serious disease. He advises its persistent administration whenever there is a cancerous cachexia, believing that it retards the development of cancer and greatly prolongs the patient's life.

We have already referred to its specific use in the treatment of phlegmenous swellings, old sores, dissecting and surgical wounds, and where there are pus cavities of long standing; also as a very positive remedy when applied whenever gangrene is anticipated or has appeared. Its influence in gangrene of the extremities has been very pronounced. It should be applied freely, externally, while given internally. In gangrene of the fingers,

the curative benefits are observable from the first application. It is useful in dermatitis venenata, in erysipelas with sloughing phagedena, and in phlegmasia alba dolens or phlebitis. In this latter condition, its external use will greatly assist the internal medication.

Echinacea in Syphilis

In the treatment of syphilis, very many observations have been reported. It has been used by itself alone, but also in conjunction with other alteratives. The longest time, of all cases yet reported, needed to perfect the cure was nine months. At present it is seldom prescribed alone, but generally in conjunction with other vegetable alteratives, and occasionally with potassium iodide.

In nearly every case, the patient begins to feel a general improved condition after taking the treatment a few days. Some of them are enthusiastic concerning the sense of well-being they experience. All the sensations of discomfort are removed, and the patient becomes hopeful and encouraged. The specific fever in the first stages soon declines, and there is a permanent abatement of all the evidences of the disease. Absolutely no undesirable influences are observed, and no side-effects to overcome. It combines in its action the influences of all the agents usually needed.

Its influence is not enhanced in all cases by the use of iodides. Occasionally when the iodides had been given, they were omitted and this treatment continued alone. An amelioration of the disorders of the skin, after the withdrawal of the iodides, was then observed. This condition often is induced by elimination of an excess of the salt.

The following most remarkable case, one of rare infection, occurred in my own practice and is reported in my "Materia Medica," from which it is quoted:

"A gentleman, aged forty-five years, apparently in good health, was vaccinated, and as the result of supposed impure virus a most unusual train of symptoms supervened. His vitality began to wane and he became so weak that he could not sit up. His hair came out, and a skin disease, pronounced by experts to be psoriasis, appeared upon his extremities first, and afterward upon his body. In the writer's opinion, the condition had but little resemblance to psoriasis. It seemed more like an acute development of leprosy than any other known condition. This advanced rapidly. His nails began to fall off, he lost flesh, and a violent iritis of the left eye developed, and ulceration of the cornea in the right set in; and for this difficulty he was referred to Prof. H. M. Martin, president of the Chicago Ophthalmic College.

"Doctor Martin gave him 10 grains of the iodide of potassium three times daily, and fed him freely upon phospho-albumin. The loss of hair was stopped, but no other favorable results were obtained. The condition progressed rapidly toward an apparently fatal termination. At this juncture, Doctor Martin asked the writer to see the case with him. It looked as if there were no possible salvation for the patient, but, as a *dernier ressort*, the writer suggested echinacea, 20 drops every two hours, the phospho-albumin to be continued.

"For perhaps ten days there was no apparent improvement. The patient was confined to his bed, being too prostrated to sit up. The nails on both hands and feet and the thick skin from the soles of his feet and the palms of his hands came off entirely, and he lost the sight of his left eye; but, after the first few days, after he was put on echinacea there was no advancement in the disease, and finally a slow improvement set in. His appetite increased, his vitality returned, his right eye was restored to its normal condition, and he began to gain in flesh.

"Doctor Martin being called away, he sent the patient back to his previous physician, who continued the treatment, with the addition of the iodide of iron; but both of the physicians attribute the marvelous results to the action of echinacea, of which about 16 ounces was given, 20 drops at a dose. The patient has regained his normal weight of more than 150 pounds, eats well, sleeps well, and enjoys excellent health."

As a Cure for Snake Bites and Rabies

Echinacea has long been in use among the Indians in the West as a cure for snake bite. It has created such a furor among the practitioners who have used it against bites of poisonous animals that it has made the reports, apparently, altogether too exaggerated to establish faith in it among those who have had no experience with it. Cases that seemed hopeless have rapidly improved after this drug was locally applied and given internally. There is at present no abatement in the enthusiasm. One physician, by means of this drug, controlled the violent symptoms from the bite of a tarantula and quickly eliminated all trace of the poison. Dr. H. C. P. Meyer has found echinacea to give prompt relief in stings from insects and in poisoning by contact with certain plants. As an antidote to

the venom of the rattlesnake, it stands without a peer. Dr. Gregory Smith gives the history of 613 cases of rattlesnake bite in men and animals, all successfully cured. With the courage of his convictions upon him, he injected the crotalus venom into the first finger of his left hand. The swelling was rapid and in six hours was up to the elbow. At this time he took a dose of the remedy, bathed the part thoroughly, and lay down to pleasant dreams. On awakening in four hours, the pain and swelling were gone. The fresh root scraped and taken freely is the treatment used by the Sioux Indians for snake bite. Recoveries from crotalus poisoning are effected in from two to twelve hours.

By far the most difficult reports to credit are those of the individuals bitten by rabid animals, of which there are between 20 and 30 at the present time. In no case where echinacea was employed has hydrophobia yet occurred, and this was the only remedy used in a large part of them. In 5 or 6 cases, animals bitten at the same time as the patient had developed rabies, and had even conveyed it to other animals; and, yet, the patient showed no evidence of poisoning, if the remedy was used at once.

One person exhibited the developing symptoms of hydrophobia before the drug was begun with. They ceased shortly after treatment. In no instance has an opportunity offered to try the remedy after the symptoms were actually developed. One poorly nourished anemic and jaundiced child was badly bitten, and the echinacea treatment improved its general condition in a marked degree.

Although subsequent developments will not be likely to sustain the clearly exaggerated statements of some enthusiastic observers. there is no room at the present time for doubt as to the leading position this agent will take in the condition named, as well as to its vital importance in the therapeutics of these conditions.

One cure of hydrophobia with echinacea is reported, the patient having been bitten by a rabid animal, one of a litter of six half-grown pups, all of which showed signs of hydrophobia and were killed. A number of persons were bitten by these pups. Two of these died of hydrophobia, three were treated at the Pasteur institute and cured, and the one just described was treated with echinacea and cured. In this instance, the doctor prescribed teaspoonful doses of echinacea every three hours. The remedy was introduced into the wounds on saturated gauze and all the injured surfaces were covered with it. The dressing was secured in place by a roller bandage. Prior to the administration of the remedy the symptoms of nervous irritation—of incipient hydrophobia—were strongly marked. After treatment, these symptoms abated rapidly, and the patient recovered in a satisfactory manner.

Echinacea has had a most marvelous influence in overcoming pyemia. We have had some extreme cases reported, where it would seem that the patient was positively beyond all help, but in which amelioration of the symptoms was pronounced and the restoration satisfactory.

Smallpox and Other Conditions

In the treatment of smallpox, conclusive proofs are now furnished us, which declare this remedy to be of great efficacy, not only in ameliorating all the phenomena of the disease, but in preventing any sequelæ. When it is applied to the skin in the form of a lotion, the pustules will be benign in their character and terminate with a minimum of scar.

Doctor Wilkenloh reports the treatment of at least 5 cases of goiter, in 3 of which there were exophthalmic complications, and all five patients were cured with this remedy alone. The Doctor gave the remedy internally in full doses, and injected from 5 to 15 minims directly into the thyroid gland, besides keeping applied externally gauze saturated with it. Massage also was used, and the general condition of the digestive system and eliminative organs received the most careful attention. As no other remedy than this one was given, there could be no doubt about its positive influence.

One of the most marked effects obtained from this remedy has been in the treatment of anthrax in man, seriously infected from animals. I have a record of several cases, in neighborhoods where there has been wide infection, which have been cured by echinacea alone, when persons, even in the same family, otherwise treated, have died. It would be impossible to convince a doctor who has used this remedy in full doses for anthrax, that it was other than the medicine itself, that had produced the beneficial results, so immediate is its influence, and so conspicuous are its effects. However, if there is any case in which large doses frequently administered *must be given*, it is in this highly infectious disorder.

Two-dram doses every hour, with a careful watch for any possible toxic action, which has been reported as occurring, is not too large a dose. This should be lessened as soon

as the beneficial effects from smaller amounts can be secured. However, I should not hesitate to give 3- or even 4-dram doses every three or four hours, for at least a short time, in cases that seem to threaten only a fatal termination from this disease.

Refraction For the General Practitioner

By Thomas G. Atkinson, M. D., L. R. C. P. (Lond.), Chicago, Illinois
Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, then you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and opens up a splendid field for good men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details, if you do not understand him fully.

Strabismus

THERE are two distinct kinds of squint, one of which arises from an error of refraction, and may be regarded as simply a manifest muscular imbalance, the other, from an organic paralysis of the ocular muscle. The first is known as concomitant strabismus, the other, as paralytic.

Paralytic strabismus, with the exception of that slight degree of internal squint accompanying cerebrospinal diseases, virtually never affects more than one eye. If, therefore, we have a case of double squint, or of alternating squint—that is, where first one eye and then the other is the deviating one—it is safe to assume that we are dealing with concomitant strabismus. Where, however, the deviation remains confined to one eye, the very first thing to be done is, to determine to which class of strabismus it belongs.

The differentiation is made in the following manner. First have the patient "fix" (i. e., direct his vision to an object 6 meters or more away) with the sound eye, which will bring the pupil of the sound eye in a line with the middle of the eyelid. The other eye then will be seen to deviate. Now make a fine chalk mark at the middle point of each lower eyelid. The pupillary center of the fixed eye will coincide with this mark, while in the squinting eye it will show deviation from the mark. Make another mark on the latter lid, to coincide with the center of the squinting pupil. The distance of the second line from the center will indicate the degree of deviation.

Now let the subject similarly fix the other eye—the unsound one—and then mark off the degree of deviation made by the sound eye, which now is the squinting one. If the degree of deviation made by the two eyes is equal, the strabismus is concomitant, caused by error of refraction; but, if the degree of deviation made by the sound eye is greater, the case is one of paralytic strabismus.

The deviation shown by the unsound eye is called primary; that made by the sound eye, secondary.

The rule, therefore, is that where secondary deviation is greater than primary, the condition is paralytic. The explanation is as follows: In concomitant strabismus, both eyes really are physically sound and in whatever direction they move they do so equally, but in paralytic strabismus one eye is partly disabled, and, under the same amount of innervation, does not move as far as does the sound one.

Having determined that the squint is concomitant, the next step is, to determine the degree of deviation. This is done by means of a candle flame reflected from the pupil.

With the sound eye fixing, we hold a lighted candle between the two eyes, in such a position and at such a distance that the reflected image of the flame is seen exactly in the center of the sound, fixing pupil, and observe in what relation to the deviating pupil the other image falls. It will not fall in the center of the deviating pupil, of course, but to one side or the other of the center.

If, on the other hand, the image still falls within the pupil, it indicates a strabismus of the first degree; if it falls outside the pupil, but within the cornea, it indicates a deviation of the second degree; if it falls on the edge of the cornea or outside the cornea altogether, it indicates a squint of the third degree.

The degree of the deviation helps to determine the treatment.

We may now make an attempt to measure more accurately the degree of strabismus in terms of functional error, expressing it in prism-angles; it is not always possible to do this, though, because a muscle which has given up the effort to maintain its balance is

plainly not any too ready to respond to the stimulus of a prism.

It should be borne in mind, also, that, if we do succeed in finding a prism that will give single vision of an object as 6 meters, that prism does not measure the geometric degree of deviation, but the functional degree of imbalance beyond which the eye is unable to maintain its poise. Thus, the geometric degree of deviation may be 30 degrees prism-angle, but a prism of 25 degrees may give single distant vision; meaning that the remaining 5 degrees the eye is able to overcome for itself.

For the refractionist, this measure of the functional capacity is much more important than any geometric measurement of deviation.

As to the treatment of strabismus, that varies greatly according to the circumstances.

In young children, moderate degrees of squint in which the sensibility of the retina—that is, the visual acuity—of both eyes, is good as a rule are readily cured by refracting the eyes and putting on the correcting lenses for constant wear. Even severe grades of strabismus in these little patients are amenable to patient and persistent refractive measures, so long as there is no amblyopia; and these measures should be given a fair trial before operative intervention is undertaken.

Where, however, the squint is severe, it is well to put the eyes under atropine for several weeks or, better still, to let the child wear strong convex glasses several hours each day, for a long period, before attempting to correct the refraction. This puts the eyes at rest and coaxes them into a state of parallel poise.

In cases in which the squint has been of long standing, and is constant in one eye, so that a functional amblyopia is established, it is necessary to straighten the eye, partly at least, by surgical means, before attempting to restore functional usefulness. These cases are altogether too difficult and complicated to be gone into here at any length. They transcend the scope of purely refractive work.

In the older child and the adult, the problem is different. Even here, if the squint is slight and recent and visual acuity is unimpaired, full correction of the refractive error (or perhaps a little overcorrection in the case of a hyperope), usually will suffice. But, unfortunately, strabismus in older persons rarely is slight or recent. Nevertheless, as long as visual acuity is normal or nearly normal in the deviating eye, it is our duty to try to remedy the squint by optical measures before resorting to the tenotome.

In adults, however, something more definitely stimulating is needed than the passive agency of convex lenses recommended for children. Prism and stereopticon exercises should be prescribed for these patients.

It is impossible in this place to go into the details of these optical gymnastics. All that can be done at this time is, to indicate the general principles on which they are to be based.

In the case of prism exercises, the general rule is, to ascertain, by the procedure described above, the margin of functional capacity possessed by the defaulting muscle and then to give a pair of prisms that will not quite cover that margin, so as to coax the muscle into action; then gradually reduce the prism assistance, week by week or month by month, until the muscle is able to do without it altogether.

Thus, if a pair of prisms totaling 30 degrees will completely compensate for the squint, and relieve it, you will prescribe a pair totaling 28 degrees. The muscle will thus be coaxed to make a 2-degree effort. When it has become used to this 2-degree effort, reduce the prisms to 24 degrees, and coax another effort from the muscle, thus gradually removing the prismatic aid. Needless to say, the refractive error must be corrected, and the correction work continued constantly during these exercises and in the intervals.

For the stereopticon exercises, have the patient use one of the ordinary cheap prism-stereoptic view-glasses that are sold in every notion store, removing the prisms from the sight-holes and replacing them with a plus 6 or 8 spherical lens. Cut the stereopticon card in two, so as to separate the pair of pictures. The patient is then to look through the lenses at the views, first in normal juxtaposition, then gradually separating the two pictures, that is, drawing them apart from each other laterally, and make an effort to maintain single vision of the view as long as possible; wearing his correction, of course, then and at all other times.

These exercises are of use only in cases of inward strabismus, there being no known method of stimulating the external recti muscles. And they are of value only where the visual acuity of the deviating eye is fairly good. Where there is amblyopia, it is useless to try to restore visual function for an adult person. The only thing left to do in such a case is, to operate upon the muscle, sheerly for esthetic reasons. Fusion of the images is out of the question.

A Case of the Morphine Habit

And Its Treatment

By George L. Servoss, M. D., Gardnerville, Nevada

IN THE latter part of July a young man, who had become habituated to the use of morphine while under treatment for an injury sustained through an automobile wreck, came to me, asking that he be relieved of the habit. His financial status was such that he could not give up his work, which was that of entertainer in a public house, and he was not in a position to take the immediate, or quick, cure. I told him that it might be a long and tedious treatment, by the gradual reduction-plan and that success might possibly not follow. He agreed, however, to place himself in my hands and to be satisfied, whether or not he were cured in the end.

The amount of morphine taken at the beginning of the treatment was about 4 grains per day, as nearly as could be judged from his description of the bulk quantity. Judging from this, I started with that dosage, divided into four or five individual doses of from 2-3 to 1 grain each. I made up a standard solution, which was reduced from day to day by the addition of distilled water. During the first ten days, the patient was not aware of the reduction, which was moderate, but thereafter for a week or ten days it was necessary to continue the same amount day after day without reduction, as withdrawal-symptoms were becoming marked. As by and by he became used to this amount, further reductions were made every four or five days, according as he became accustomed to the smaller amount.

At the end of four weeks, there was absolutely no morphine present in the solution, a normal salt solution having been substituted; and this latter placebo was continued for ten days. During this time, the withdrawal symptoms, as shown by pain in the thighs and legs, an inability to sleep, and other nervous manifestations, were marked. To allay the nervous irritation, the patient was given from 1-32 to 1-6 grain of solanine hydrochloride at hourly intervals during the day, while, for ensuring sleep, he was given three doses of sulphonmethane, grs. 5; scutellaroid, gr. 1-3; solanine hydrochloride, gr. 1-32; and cactoid, gr. 1-64; repeated at hourly intervals, for two or three doses, beginning at 1 o'clock a. m

During the time of reduction, the bowels were given attention and other eliminative organs and the skin stimulated. As a cathartic, the Hinkle cascara cathartic combination, one or two tablets every second night, was employed; and, to overcome formation and absorption of toxins from the bowel, the sulphocarbolates were used continuously, and more especially as the withdrawal symptoms became more marked. The Hinkle formula was employed after it had been clearly shown that calomel produced too much irritation of the stomach and the patient was losing ground through its use.

As a tonic, the triple arsenates, with nuclein, were employed, a full dose being exhibited after meals, and this served to maintain the tone of the patient as well as to keep him in good appetite, which latter he had been losing until this combination was employed.

The last week of the treatment, during which time he was receiving no morphine, the patient, unless he was under the effect of solanine at all times, suffered very markedly and for three or four nights obtained but very little sleep. When he did get to sleep, he would be awakened through the jerking of his legs. With the addition of the sulphonmethane combination, an improvement was noted and on the morning of August 24, or one month, to the day, after the treatment was instituted, he walked into my office and said, "We have won." The night before, he had gotten between eight and nine hours continuous sleep and awakened the following morning without any of the withdrawal symptoms whatsoever, and without the least desire for his customary "shot."

Elimination the Watchword

I realize that I have nothing particularly new to report in this case or in its treatment; however, I believe that it emphasizes the fact that elimination has much to do with the cure of the habit.

Throughout the time this man was under observation, every eliminating organ in his body was stimulated to the utmost, and, although he had marked withdrawal symptoms, these were not at any time sufficient to cause him to give up his work, that of playing

a piano from early in the evening until the wee small hours of the morning. Nor did he become crazed, as do many who take the quicker cure, even though during the last week of treatment it was with difficulty that I kept him from obtaining a supply of the drug and so starting the habit over again.

It was a noticeable fact that on the mornings after the taking of the cascara compound the withdrawal symptoms were less marked and that after the effect of the sulphocarbolates became more marked these symptoms became less and less. The solanine relieved the nervous symptoms during the last three or four days of the treatment, and to such an extent that the patient was able to remain at work without showing any very great nervousness.

I believe that, had this patient been working under different, more normal conditions, and if he could have dropped his work for the time being and been continuously under my care and observation, the cure could have been consummated in shorter time.

It is to be noticed that during the last week or ten days the symptoms were controlled without the use of a single dose of morphine and that at the end of that particular period the desire for the drug was abolished to such an extent that there was no demand for even the morning "shot," and this though the patient was supplied with what he supposed was a solution of morphine.

In carrying on the reduction I made the primary solution as above stated, each cubic centimeter carrying 2-3 of a grain of morphine sulphate. This solution was kept in my office, the patient coming to me for his daily dose, which was either 4 or 5 Cc. As each dose was taken out of the bottle, distilled water was added, which, naturally, reduced the next dose. At the end of the first ten-day interval, owing to withdrawal symptoms, the dose was held for four days at the same amount, and then again gradually decreased in the manner described. At any time the withdrawal symptoms reappeared, the dose was again held stationary for a day or two.

Having, following the tenth day of treatment, made an error in my computation, as to the exact amount of morphine in the solution, I do not know the exact dosage thereafter. At that particular time, the patient was getting 0.015 grain five times a day, and I know that thereafter the reduction was much more rapid. After losing track of the exact amount of morphine present, determinations as to its presence or nonpresence were made from day to day by tests with ferric chloride, until such time as they showed an absence of the drug in the solution. After that, a physiologic saline solution was employed as already told.

While we are told by the authorities that we must enforce idleness upon our patients, if we would obtain results, I believe that this particular case demonstrates that a case may be carried through to a successful termination if the reductions at all times are made as indicated and the eliminative functions stimulated to their utmost. My patient did not lose a single "shift" of work and was at no time incapacitated. The withdrawal symptoms were nicely controlled with other drugs than morphine, drugs which produced no bad effects and which did not interfere with the elimination of toxins.

As you will observe, other than in the reduction of the drug, there was not a set line of treatment, the indications for various remedies being met as they arose.

From my experience with this case, it is my opinion that any other victim could be treated in like manner, were the patient held well in hand at all times and made subservient to the doctor's will.

We Should Not Mind

By George C. Mason

We should not mind if skies are gray,
If joy but dwells within the heart,
With conscience clear from day to day.
We should not mind if skies are gray,
Just cease to worry and repine,
And let the sun of laughter shine
Across your rugged, upward way
And you'll not mind if skies are gray.

We should not mind how rough the road,
Just so the goal is fair and sweet,
Or when 'tis love that plies the goad.
We should not mind how rough the road,
Just so we're treated fair and square,
Just so we feel we're getting there.
We laugh and sing beneath the load
And do not mind how rough the road.

We should not dread the coming night
That marks the passing of the soul,
Just so our lives show clean and bright.
We should not dread the coming night,
It means surcease from toil and strife
And progress in the scheme of life.
If we have striven for the right
We should not dread the coming night.

What Others are Doing

CALCIUM FOR COUNTERACTING SIDE-EFFECTS OF BROMINE AND IODINE

Calcium, as is known, antagonizes the physiologic action of bromine and iodine, as demonstrable by experiments with muscles; this element, in combination, also exercises an antiphlogistic action. These facts determined E. Frey, of the Pharmacologic Institute at Marburg (*Med. Klin.*, 1914, p. 357), to test the value of calcium for preventing the inflammatory processes of the skin and mucosas often following in the wake of a course of bromine and iodine treatment. Consequently he substituted the calcium salts for the customary alkali compounds, and results proved so satisfactory that he now warmly recommends this practice for wider adoption.

This report bears out our own experience with calx iodata (calcidin) which rarely (if ever) produces the train of disagreeable symptoms known as "iodism."

HYDRASTININE IN PULMONARY HEMORRHAGE

In a communication to the *Therapeutische Monatshefte* (July, p. 505), Doctor Roeher complains of the slighting manner with which writers on hemoptysis treat hydrastinine as a remedy, this agent generally being passed over with a mere mention by name; and this in view of its well-known hemostatic properties, particularly in uterine bleeding.

The author is on the staff of a hospital at Grabowsee, Germany, and there of late the hydrastinine (synthetic) was given a trial in a few consecutive cases (only 5) of severe hemoptysis; and, inasmuch as the action was so marked—indeed, better than ever witnessed from other means, barring elastic compression of the extremities and, in certain forms, from digitalis—he makes a detailed report of them. The patients mostly were phthisics, and in 4 a single injection promptly arrested—and that permanently—the flow of blood; the fifth (advanced tuberculosis) required two doses.

The author candidly admits that his experience is not conclusive, further observations being necessary to determine whether hydrastinine actually is a positive aid in all forms—capillary, venous or arterial—of pulmonary bleeding.

The editor of CLINICAL MEDICINE knows of such brilliant results following the use of emetine hydrochloride in hemoptysis that he hesitates to suggest a substitute for that drug; yet hydrastinine certainly deserves careful trial and may well be used in alternation with or to maintain the action of the emetine.

In uterine hemorrhages, especially uterine oozings, hydrastinine stands practically in a class by itself, its only rival being ergot—still without a peer for checking sudden and severe flooding.

QUININE THERAPY IN EXOPHTHALMIC GOITER

R. Gautier reports having witnessed gratifying results in numerous cases of exophthalmic goiter following the prolonged use of quinine in heroic dosage (*Presse Méd.*, 1914, p. 267). According to the severity of the condition, Gautier prescribes 1, 2 or 3 Grams of the quinine salt (hydrochloride) to be consumed a day, for fifteen or twenty days in each month; and this regimen to be persisted in for several months.

This seems to be an adaptation of the method introduced by the late Doctor Forchheimer of Cincinnati, now adopted by many other American physicians, consisting in the use of 5-grain doses of quinine hydrobromide, four times a day, in association (usually) with 1-grain doses of ergotin. We know of many brilliant successes in the treatment of exophthalmic goiter with these remedies, and recommend them to our readers with confidence.

THE FRENCH TREATMENT FOR INFANTILE COLITIS

For the incessant vomiting of infantile colitis, Hutinel gives iced Vichy, in case of failure injecting the dysenteric serum. To weak children he gives tea slightly sweetened with milk sugar. Instead of ordinary water

he orders boiled water with 1 grain sodium bicarbonate and 5 grains sodium chloride to the liter. The bowels are washed out with an isotonic solution, containing flaxseed tea with 7.5 grains sodium chloride to the liter. No antiseptics are prescribed, but if the stools are offensive, he gives enemas of boiled water, 1 liter, oxygenated water, 50 Grams, sodium phosphate 3 Grams, sodium chloride 5 Grams, sodium bicarbonate 1-2 Gram. Copious enemas distend the bowels.

In dysenteric forms, applications of silver nitrate, potassium permanganate, or a decoction of ipecac, 1 or 2 Grams to 250 of water, are found valuable. For tenesmus small hot enemas of 100 Grams of salt solution, adding one to three drops of laudanum. In some choleriform cases, and if the child has taken much milk, the stomach must be washed out.

Calomel may provoke hemorrhages. Castor oil or sodium sulphate is better. He repeats the old argument against soluble antiseptics, favoring benzonaphthol and bismuth salicylate. Hot baths are sedative. For a tendency to syncope he injects camphor, meets cyanosis with adrenalin, vasoconstriction with the nitrites, and convulsions with bromides.

Naturally, after this feeble treatment his little patients remain invalids a long time, with cachexias, hypersensibility of the bowels, and uncontrollable cases of vomiting. The constipation requires castor oil, suppositories, flaxseed, but no magnesia. They have fetid breath, calling for Glauber salts, Vichy or Carlsbad water. Their debility demands wine—a glass of Madeira before each meal—and the digestive ferments.

From another source we find evidence that the gastroenteric maladies of children still present as formidable a problem to French physicians as they did to us twenty years ago. Discussing the depopulation of France, Ramu says (*Ann. de. Med. et Chir. Infant.*, April 15, 1914) that among the general factors is the mortality of the first year. At the infants' clinic at Nancy the mortality fell from 74 percent in 1910 to 48 percent in 1913. The mortality from gastroenteritis and cholerine in 1910 was 78.68 percent and had fallen to 73.33 percent. That from bronchopneumonia fell from 90 percent to 53.33 percent. First in his list of failures he places "certain forms of gastroenteritis rebellious to all treatment."

They need missionaries in the land where Burggraeve established his reforms. Compare the foregoing feeble, archaic and ineffective treatment with that which has made the terrors of cholera infantum a thing of the past in our own country. Subdue the excitement of the pneumogastric, as manifested by vomiting and purging, by a hypodermic dose of atropine large enough to flush the skin. Give the sulphocarbolate of zinc, sodium or lime, or the three combined, in small and rapidly repeated doses until the stools have lost all abnormal odor. Keep the child warm. Relieve tenesmus by small enemas of water, hot as can be borne; if dysenteric, add silver nitrate, 1-8 grain to the ounce. Order water in abundance, lukewarm or hot. No food until it can be retained and utilized; then raw eggs, white infused in ice water. As indicated, when reaction has occurred, emetine in minute doses to incite healthy digestive secretions; calomel and saline laxative to keep the bowels clean; hydrastoid as a digestive tonic; and a choice of many remedies as the need for each becomes apparent.

HELMINTHIASIS AS A CAUSE OF NEUROTOXEMIAS

The result of a series of animal-experiments has been made public recently by Rachmanoff, that will interest the general practitioner. The presence of worms in the intestines is recognized as not infrequently giving rise to a variety of nervous phenomena, sometimes of a quite severe nature; but, since the direct connection could not be established, the most common explanation has been that of irritation reflex. Now Rachmanoff (*Ann. d. L'Inst. Pasteur*, Feb., 1914) claims to have brought proof of helminthogenous toxins causing these neuroses.

These experiments consisted in injecting into cavies extracts derived from various kinds of worms (e. g. tænia plicata equi, ascaris megalocephala) and also infecting other of these animals with the respective parasites themselves.

The respective cavies exhibited symptoms of subacute or of acute toxicoses, and in these cases alterations in the nerve-cells, the neuroglia, and the fibrils of the white matter were demonstrable; the latter even disappearing in severe attacks. The intensity and duration of the toxicosis depends upon the degree of nerve lesion produced by the specific toxins absorbed from the intestine. In the anaphylactic state produced by the presence of worms, the lesions of the nerves are far more pronounced, and of more frequent occurrence than when a toxicosis is

directly produced by injecting the parasitic toxins.

Inasmuch as not infrequently nervous phenomena (occasionally very severe ones, such as symptoms of meningitis) are observed in worm-carriers, Rachmanoff is inclined to consider them anaphylactic in nature.

A REMEDY FOR BOILS AND SKIN INFECTIONS

We have recently given the experience of Doctor Tweddell, who, in treating furunculosis, seems to get better results with dilute sulphuric acid than with any other remedy. Now let us quote Carroll W. Allen (*New Orleans Medical and Surgical Journal*, July, 1914, p. 17) who, after using a variety of remedies, including autogenous and stock vaccines, sulphur baths, carbolic-acid injections and baker's yeast, all in his own person (for he was the sufferer in this instance) finally resorted to dilute nitromuriatic acid, of which he took 10 to 15 drops in water after each meal. Within a few days he began to note improvement; the well-developed lesions soon disappeared and those in the process of development were quickly aborted. As a result of his experience he now recommends this remedy to others.

SUBSTITUTION OF DIGITAL PHALANGES

Since 1907, Lexer has practiced substitution of phalanges of the fingers by other bones, having performed this operation, both autoplastically and homoplastically, a number of times with eminent success. The bone selected is a suitable phalanx of a toe, and the periosteum of the inserted bone is fastened to the respective articular capsules by means of a few stitches. Exarticulation of the toe is obviated by fastening in the vacated space a piece of rib-cartilage trimmed to fit.

The author's most recent case was that of a young woman, on the middle phalanx of whose third finger a periosteal sarcoma had formed. Healing proceeded nicely, and three weeks after the operation (the date of the report) she already could execute movements with the finger, as also with the toe.

THE LOCAL APPLICATION OF IODINE IN DIPHTHERIA AND SCARLET-FEVER

Iodine is now considered one of our best bactericidal agents. In view of this fact, it has been employed by A. H. Thomas (*Brit. Med. Jour.*, Jan. 10, 1914, p. 85) in the treatment of 30 cases of diphtheria and 19 of scarlet-fever, as well as in 10 other cases suspected of being of similar origin; the form used being that of an ointment containing 5 percent of free iodine.

This ointment is applied as follows: 3 cotton-wool mops are used, two to remove the secretions and false membrane, and to dry the affected surface; the third, after smearing it with the ointment, is thoroughly rubbed over the inflamed tissue and surrounding areas. These applications are repeated every three hours or, in severe cases, every two hours, until improvement occurs.

Under this treatment, Thomas says, many cases of diphtheria clear up within a few hours, the throat becoming quite free from false membrane on the second or third day. In the scarlet-fever cases, there was remarkable freedom from local complications.

CARBON-DIOXIDE SNOW FOR THE OBLITERATION OF BIRTH-MARKS

George S. Foster, in *The Vermont Medical Monthly* for June 15, 1913, page 131 reports his experience with carbon-dioxide snow. After describing the method of preparing the cubes employed, Foster presents his technic for the treatment of angioma.

As a rule, he says, 2 cm is a sufficiently large surface for an application at one time, and only one or two applications, without pressure, should be made at a single sitting, but their number may be increased after the degree of reaction has been found out. At first twenty seconds' contact is enough for an application; later this may be increased to a minute and a half if thought necessary. The depth of action is increased by the degree of pressure exerted.

When the snow first meets the skin, a sharp burning sensation is felt, which ceases in about five seconds. This same sensation however reappears when the warm blood returns, and then lasts for about thirty minutes. Following this, in from three to six hours, a bulla will form. In from two to five days, the serum within this bulla becomes hardened, desiccation sets in, and one or two days later the scab is formed and completely dried up.

In case irritation persists during the first stages of this reaction, compresses, wet with cold boric-acid solution may be applied. The dry scab should not be softened by means of ointments, or anything else, but allowed to drop off spontaneously. After recovery from the reaction, a second treatment may be given

if necessary, but this never must be done before the scab has come off by itself. Sometimes, as for instance in the case reported by the author, a considerable number of successive applications must be made before recovery is complete. When the work has been well done, the blemish disappears, leaving only a thin white, shiny scar, which is noticeable only in quite close proximity.

GELSEMIUM IN THE TREATMENT OF NEURALGIA

Another contribution to the therapy of gelsemium is found in the report of Bériel to the Medical Society of the Lyon hospitals, published in *La Province Médicale* (July 25, 1914, p. 331). Doctor Bériel finds gelsemium a very inconstant remedial agent, but in many instances capable of giving great relief from neuralgic pains. His experience with the remedy again suggests the advisability of using the alkaloid instead of the more or less uncertain galenic preparations.

The Doctor declares that it is impossible to lay down rules as to which cases of neuralgia or pain of nervous origin will yield to gelsemium. However, he has found it of value most frequently in the treatment of facial neuralgias, especially in the neuralgias accompanied by vasomotor disturbances. Also, it has been prescribed with benefit for neuralgic pains accompanied by facial spasm. In some instances, the relief obtained is quite remarkable, and Doctor Bériel now uses gelsemium in treating persistent nerve pains, particularly in facial neuralgia, before resorting to the injection of alcohol, upon which formerly he largely depended.

In order to secure the results desired, he has found it necessary to give the remedy in much larger doses than those usually recommended. Most of the books, for instance, advise a dosage of from 6 to 15 drops of the fluid extract per day. He has found from 30 to 35 drops, given in divided doses, and beginning with a relatively small quantity, not only harmless, but, as a matter of fact, necessary to secure desired results. He begins with 15 drops a day, increasing by 2 to 5 drops every day thereafter, until the results desired are attained, or a total of 30 to 40 drops has been reached.

As a rule, remarkable sedation is produced by the remedy before the maximum dose is reached. If in this way no relief is obtained, then the drug should be discontinued. Usually several days are required—a week on the average—to secure the desired action.

As already suggested, much more uniform and satisfactory results can be obtained by the use of gelseminine. This alkaloid is of extreme value in the treatment of many cases of neuralgia, and should be employed much more than it is.

HAS PYORRHEA BEEN MASTERED AT LAST?

What promises to be the most important therapeutic discovery since Ehrlich put out salvarsan has been announced within the last four months. We hope no reader of CLINICAL MEDICINE will lose sight of this, or fail to take advantage of it. In August, Barrett and Smith published in *The Dental Cosmos* (see our abstract, September CLINICAL MEDICINE, page 805) the report of studies apparently showing that pyorrhea, or interstitial gingivitis, is due to the action of an ameba, and that emetine hydrochloride, applied locally, would cure it. An announcement of later and equally important work in this field appears, editorially, in the October number of *The New Orleans Medical and Surgical Journal*. We reprint the entire editorial herewith:

"Though pyorrhea alveolaris, or Riggs' disease, is generally looked upon as a disease of minor importance and is usually relegated to the dental practitioner, it is quite possible that its importance has heretofore been very much underrated. The announcement of its specific cause and cure, therefore, will be received with some gratification.

"At the meeting of the Orleans Parish Medical Society held on September 14, Drs. C. C. Bass and F. M. Johns, of the Tulane College of Medicine, presented a paper in which they reported having found an ameba (*Entameba buccalis*) in the mouth lesions of 85 out of 87 cases examined, and in all stages of the disease. They further announced having obtained most remarkable and gratifying results from treatment with emetine hydrochloride, administered hypodermically. The full detail of the paper will appear in the *Journal*, but the effect of this announcement should be so far-reaching that we are presuming to present the news before we publish the full story of the method and results.

"Amebæ have been known to exist in the mouth, and this fact has been established for years, but their pathogenic relation is now determined by the work of Bass and Johns.

"The use and efficacy of ipecac and of emetine in amebic dysentery is well established, and these drugs have been employed

extensively. Smith (A. J.) and Barrett have obtained considerable success in the treatment of Riggs' disease by local application of emetine to the diseased gums, and their work (*Dental Cosmos*, Aug., 1914) may be held as pioneer in this particular disease and with this remedy.

"Bass and Johns have experimented considerably with the object of determining the proper dosage of emetine for this purpose, also to ascertain the proper interval between doses and the necessary duration of the treatment. They have not reached final conclusions, and are emphatic in stating that further experience and experiments now under way are likely to modify the present routine.

"The dosage suggested is 1-2 grain of emetine hydrochloride dissolved in one Cc. of water, given hypodermically in the arm (or other part of the body) each day for three successive days. A similar dose should follow every fourth to seventh day until the gums are entirely healed and the loosened teeth have been tightened in their places. The degree of peridental membrane destruction will determine the length of treatment—which may be only a few days or may need months.

"The object of the repeated doses of emetine after the first few days' treatment is to destroy any amebæ which may have escaped the previous treatment and to prevent the reinfection likely to occur before the gums have had a chance to heal and the root sockets to resume a normal condition.

"Infection with this particular ameba is widespread, and the authors suggest that brushing the teeth with a few drops of fluid extract of ipecac on a wet brush may be prophylactic in mild or early cases of the disease. Bass and Johns express the belief that the treatment submitted by them is specific for Riggs' disease, but that it cannot be expected to replace the physical damage done by the disease. The usual dental care of the mouth must be practiced, and the treatment of gums and mouth is necessary just as if there were no such infection.

"The *Journal* is enthusiastic over this further gratifying success of Bass and Johns, who, it will be remembered, gave new life to the study of malarial organisms not long ago. This new achievement can only bring the highest of praise and encouragement from their many professional friends and adherents, while, if the method carries as far as it should, it will bring the blessings of a multitude of those afflicted."

Barrett and Smith recommend filling the gingival sacs and their walls with a 1-percent solution of emetine hydrochloride. This is certainly more logical than to use the ipecac locally, as advised by Bass and Johns. The ideal method of treatment would apparently be the conjoint use of the hypodermic injections and local applications.

EMETINE IN HEMOPTYSIS

From time to time we have printed reports of the use of emetine hydrochloride in the treatment of hemorrhage from the lungs. More and more convincing testimony of the value of this remarkable remedy in this condition comes to hand from various sources

Among others, Fernand Persillard (*Province Médicale*, July 25, 1914, p. 330) declares that emetine is "a most precious therapeutic resource" in the treatment of hemoptyses occurring during the course of pulmonary tuberculosis. When given in 2- to 5-centigram (1-3 to 5-6 grain) doses subcutaneously, this remedy exercises an effective and rapid antihemorrhagic action, although this may be of short duration, requiring the repetition of the dose. It is effective in all forms of tuberculous hemoptysis. Even when the hemorrhage is associated with large cavities, it often is arrested promptly. However, it is in the congestive, apyretic forms that it gives the best results.

No secondary by-effects are produced, such as nausea, vertigo or palpitation. Owing to the short duration of its action, the injection should be repeated upon the following day, this treatment being continued for several days, until the hemorrhage apparently has entirely ceased. Given in doses of 10 to 12 centigrams (1 2-3 to 2 grains), emetine is entirely harmless.

Doctor Persillard says that the remedy is easy to employ, and, while it will not succeed in every instance, it is something that the physician can depend upon in the majority of cases.

HOW AND WHERE TO INJECT EMETINE HYDROCHLORIDE

There are occasional reports of pain or discomfort following injections of emetine hydrochloride. Perhaps these results are due to defective technic. Dr. F. M. Sandwith, in his Lettsomian Lecture on "Dysentery," published in *The Lancet* of September 19, 1914 (p. 731), says that emetine should not be administered immediately under the skin, since when this is done painful lumps and

bruises may occur. Nor is it necessary to insert the needle into the body of the muscle. He prefers to inject it three inches beneath the clavicle, or elsewhere in the subcutaneous cellular tissue. The only inconvenience which he has met with, after such use, has been a very slight tenderness at the site of injection on the day following the administration of the drug, while a few women complain of slight muscular pain after its use.

TREATMENT OF PRURITUS ANI

Two remedies for the treatment of pruritus ani, both said to be effective, are suggested by Cropper (*British Medical Journal*, May 2, 1914). The first of these is tincture of iodine (B. P.), which may be used in one-half or full strength. It is painted over the mucous membrane of the affected area, usually about three times a week. Care should be taken not to excoriate the skin.

The other remedy is compound tincture of benzoin. This is said to be even more effective than the iodine, and it is cleanly and does not soil the linen. It may be used twice or thrice daily and it never irritates. Within two minutes after application, the spirit in the tincture evaporates, and then all temptation to scratch the part disappears.

THE TREATMENT OF DIPHTHERIA CARRIERS

A method of cleaning up the throats of diphtheria carriers, which has proven successful in the hands of Dr. H. R. Miller (*Medical Record*, July 25, 1914, p. 158) is to spray the patient's throat, one hour before or at least two hours after the ingestion of food, or later, with a one-fourth of one percent solution of formaldehyde (40 percent). Usually he begins with the weaker solution and gradually increases its strength. Three, five, or even six days of treatment are required. A number of cases reported show the efficiency of this method.

EUCALYPTUS OIL IN SCARLET FEVER

English medical papers, during the last year or more, have had much to say about the value of inunctions of eucalyptus oil in the treatment of scarlet fever. Not only are these inunctions believed to check the spread of the disease by sterilizing the skin and preventing the scattering of the disease-bearing epidermis, but the remedy is asserted to have a direct modifying action upon the disease-process itself. Dr. Henry C. Becker, in his fine paper on the treatment of scarlet fever, in *The New York Medical Journal*, of August 1, 1914, says that as a disinfectant oil of eucalyptus is three times stronger than carbolic acid, though when applied externally it is less irritating to the skin than most essential oils. Since it evaporates from the body, the vapor is inhaled, thus exerting a disinfectant action upon the air passages and lessening the tendency to ear and throat complications.

Eucalyptus oil may be applied pure, before desquamation has set in, the patient being rubbed once or twice daily with it; but after desquamation, it is better to mix the oil with equal parts of liquid petrolatum or a cold cream made with the mineral oil as a base. Such dilution delays evaporation, prevents dusting of the epithelium, and also prevents absorption of too much of the eucalyptus (which is said to be a kidney irritant) by the skin. Also, rubbing with this mixture every morning has a protective influence against accidental chilling. Finally, these applications give great relief to the itching of which many patients complain.

QUININE HYDROBROMIDE AS A PELLAGRA CURE

Of "cures" for pellagra there seem to be no end. No one realizes this better than Isadore Dyer of New Orleans, who, in *The Texas State Journal of Medicine*, for July, 1914, gives a long list of the various medicinal preparations recommended for this disease and which have been used with a greater or less degree of success. However, Dyer has employed still another drug, and since his results are based upon an experience of seven years, with nearly 100 cases, without the loss of a single patient treated entirely by himself, the method which he suggests certainly demands consideration and respect, especially in view of Doctor Dyer's high standing in the profession. The remedy recommended is quinine hydrobromide.

Regarding this drug, Doctor Dyer says: "I consider it as nearly specific as any drug mentioned by any one who has until now written about the disease." In mild cases he gives from 2 to 5 grains three times a day, and in severe cases as much as 10 grains every two or three hours, night and day, for a period of four or five days.

While various other remedies are suggested for the treatment of the diarrhea, Doctor Dyer declares that the quinine alone will

control this symptom, and usually within the first five days. For the stomatitis, potassium chlorate, in 3-grain doses, given with iron lactate in the same quantity, is recommended. Other drugs sometimes useful are strychnine and the calcium salts, while the citrous fruits are of service in the scorbutic type. However, the essentials of treatment are: (1) cheerful surroundings; (2) to keep the patient out in the sunlight; (3) to keep the patient out of bed; and (4) the quinine hydrobromide.

BACTERIN THERAPY IN DISEASES OF THE UROGENITAL TRACT

From an article by L. W. Bremerman, published in the July, 1914, number of *The Chicago Medical Recorder*, it appears that one of the most common causes of failure in the bacterin treatment of diseases involving the urogenital tract is, inability to recognize the fact that a large variety of bacteria are responsible for the infections occurring in that locality. Probably the bacillus coli and the bacillus tuberculosis are responsible for the more typical infections, observes Doctor Bremerman. The following table, which we reprint from his article, gives an idea of the variety of organisms that may be found:

DISEASE	BACTERIOLOGY
Acute nephritis, pyelonephritis and pyelitis.	B. coli, streptococcus, pneumococcus, staphylococcus. bacillus pyocyaneus.
Chronic nephritis, pyelonephritis and pyelitis.	B. tuberculosis (primary), pyogenic bacteria (secondary), B. coli, B. pyocyaneus.
Acute cystitis.	B. coli, pneumococcus, streptococcus, staphylococcus.
Chronic cystitis.	B. coli, B. tuberculosis (primary), with secondary pyogenic bacteria.
Acute—	
Urethritis.	Gonococcus, staphylococcus, streptococcus, pneumococcus, B. pseudodiphtheria.
Epididymitis.	B. tuberculosis, together with pyogenic organisms, as above.
Prostatitis.	Gonococcus, staphylococcus, streptococcus, B. pseudodiphtheria, etc.
Vesiculitis.	Gonococcus, B. coli, pneumococcus, streptococcus and staphylococcus
Chronic—	
Urethritis.	Gonococcus, B. coli, B. tuberculosis, associated with pyogenic bacteria.
Epididymitis.	
Prostatitis.	
Vesiculitis.	
Vulvovaginitis.	
Acute metritis, endometritis and salpingitis.	
Chronic metritis, endometritis and salpingitis.	

Doctor Bremerman, while admitting the value of stock vaccines, still is inclined to prefer the autogenous ones. He also advises against exclusive dependence upon bacterin treatment, especially in cases of colon infection.

THE BACILLUS BULGARICUS IN DIABETES

Those who have come to look upon diabetes as an incurable disease should be interested in the statement made by Dr. Philip Horowitz in *The New York Medical Journal* for August 8 (p. 260), that "not only is it not a hopeless condition, but it is positively curable in the majority of cases." Doctor Horowitz declares that since March, 1912, he has treated 102 patients for diabetes, and that in 52 of these the sugar has been entirely eradicated from the urine, most of these patients being now on a fairly normal diet. In 4 others, the sugar has been reduced to a trace, and 39 of the remaining patients are improved, some of the latter being still under treatment and probably curable. Of the remaining 7 treated, 1 received no benefit, 2 died of nephritis, 2 died of pneumonia, 1 of cancer, and 1 of tuberculosis. This certainly is a remarkable record, and should inspire optimism, and stimulate other physicians to a close study of Doctor Horowitz's methods.

The distinctive features of Doctor Horowitz's treatment are: (1) the use of cultures of bacillus bulgaricus; and (2) a proper and closely regulated diet. The use of the Bulgarian bacillus depends upon the belief that intestinal autointoxication is an important (perhaps the most important) factor in the etiology of diabetes. Doctor Horowitz is convinced that the condition is caused by a protein toxin, or toxins, formed in the alimentary canal and interfering with the proper function of the liver and pancreas, and possibly, also, with other organs having internal secretions.

In using the Bulgarian bacillus, which he administers in bouillon form, the author insists upon the importance of giving sufficient amounts. In the mild forms, a much smaller quantity is used than in the severe forms of the disease. It is usually given, in a little water, one-half hour before meals and before retiring.

In the few cases in which the improvement is not satisfactory, and where apparently there is an infection of the bowel with gas-

forming bacteria, Doctor Horowitz supplements the dose of the Bulgarian bacilli given by the mouth with colonic injections of cultures of this organism. Before administering the enemas containing these cultures, the bowel should be washed out thoroughly with normal saline solution; then a considerable quantity of the culture is introduced through a funnel and rectal tube, and any residue of the bouillon clinging to the tube is washed into the bowel with a few ounces of lukewarm water before it is withdrawn.

Doctor Horowitz also insists that full doses of the culture must be continued for some time after the sugar has disappeared from the urine. He has not found it safe to reduce the dose for at least four to six weeks after repeated analyses show glycosuria to be absent.

Doctor Horowitz also insists upon great care in the feeding of these patients. While no stereotyped diet can be adopted as desirable in every case, every patient should receive some form of carbohydrate. He prefers rice, oatmeal or wheatena, very thoroughly cooked. From 45 to 90 Grams of cereal is given once a day, preferably for breakfast, except when the patient is suffering from acidosis, when it is given with every meal. Patients also receive from 60 to 90 Grams of thoroughly toasted white bread. The quantity of bread is increased as the percentage of sugar begins to diminish. From 4 to 6 eggs are allowed daily; but fried or scrambled eggs are forbidden if there is acetone or diacetic acid in the urine. If there is acidosis, fats of any kind are forbidden. Not to exceed 4 ounces of milk is permitted in tea or coffee or with the cereal. However, when the percentage of sugar is high, no milk is allowed. Lean meats are permitted, including 250 Grams daily of broiled steak, lamb, mutton chops, chicken, turkey, and so on. Fried or roasted meats or rich gravies are not permitted. Doctor Horowitz allows spinach, string-beans, celery, lettuce, and asparagus. Vinegar or other vegetable acids are taboo. Among the fruits, grapefruit is given first choice, but as the case clears up sour oranges may be added. Apples are not allowed until the urine is sugar-free. Alcohol and alcoholic drinks, of course, are forbidden.

Among the drugs, of most importance are those having a cholagog action, stimulating the liver function, including the various laxatives, salines, and mineral waters. In some cases, the lower bowel is cleared with enemas of olive- or Russian mineral oil. If we may interpolate a suggestion, it would be that boldine, a hepatic stimulant of great value' be added to the list.

The editor of CLINICAL MEDICINE has seen a number of reports of splendid results in diabetes, following the use of the Bulgarian-bacillus tablets and bouillon. We hope that many physicians will be encouraged to give this method a trial.

OPIUM-EATERS AND EMETINE FAILURES

There are, as we know, occasional failures in the use of emetine in amebic dysentery, and one of the causes of such failure is pointed out by Carter in an article contributed to *The Indian Medical Journal* for March, 1914.

Carter declares that the amebicidal effect of the alkaloid is delayed in patients who are confirmed opium-eaters. Also, it is in the case of these unfortunate individuals that we get the cases of rapidly fatal acute gangrenous dysentery. Doctor Carter believes that lack of success with emetine in such instances and under such conditions is due to the effect of the opium, in producing stagnation of intestinal contents, with consequent accumulation of amebæ-laden feces in the pouches of the large intestine.

CHOLERA IN THE BALKANS

In view of the reports indicating the appearance of cholera in Austria and the adjoining Balkan and Russian provinces within the last month, we have read with interest Dopter's comments upon the cholera epidemic which occurred during the recent Balkan war, as published in the *Paris Médical* for August 1, 1914 (p. 207).

According to Professor Dopter, cholera was brought into Asia Minor by Turkish troops, these spreading the disease in Thrace early in the war, the Bulgarians suffering particularly, especially before Tchataldja. The Bulgarian troops in turn carried the disease into Macedonia, where it was propagated by the Greek and Servian soldiers.

How many of the Turks suffered from cholera, there is no means of telling, but among the Bulgarians it is said there were more than 15,000 cases, with 6000 deaths; among the Servians, 10,000 cases, with 2500 deaths; and, among the Greeks, 1000 cases, with 348 deaths. Professor Dopter declares that the Grecian troops suffered less than those of the other combatants, because of the care taken in prophylaxis. Not only were anticholera posts provided on the firing-line,

with portable laboratories, in order to insure accurate and early diagnosis, as well as isolation hospitals for the care of cholera patients, but a general plan of preventive cholera vaccination was instituted. Altogether 93,868 Greek soldiers and officers were vaccinated. Of these, 21,216 received but a single vaccination, the remainder, 72,652, being inoculated twice.

Following are the results: Of the 21,216 vaccinated once, 662 were attacked; or 3.12 percent. Of the 72,652 vaccinated twice, 319 were attacked, a percentage of 0.43. Of those not vaccinated but exposed, 14,332, 849 were attacked; a percentage of 5.75.

These figures certainly demonstrate the great value of prophylactic vaccination against cholera.

CHRONIC ARTHRITIS

Chronic arthritis, whatever its etiology, is now believed to be generally of focal origin. This is the position taken by Frank Billings (*Ill. Med. Jour.*, Sept., 1914, p. 164). He says that in order to treat these cases successfully it is first necessary to locate the portal of entry of the infectious organisms and parasites. He adds that, if the cause is accurately determined, all progressive types of the disease may be checked and recovery follow, unless there are destructive bone, cartilage or other tissue changes.

However, it is not always easy to locate the focus of origin of the disease, and it is necessary to investigate all possible sites. Doctor Billings' experience indicates that the following regions of focal infection are likely to be found, with respect to frequency and importance, in the order named: faucial tonsils and dental alveoli (with secondary cervical lymphnodes) of about equal importance; sinuses of the head; intestinal stasis, due to abnormal anatomy; chronic prostatitis and seminal vesiculitis; pelvic disease of women; chronic pyelitis; chronic appendicitis; chronic cholecystitis and chronic abscesses anywhere else in the body. More than one of these foci may coexist. Consequently, it often requires repeated examinations, aided by specialists in diagnosis of the ear, nose, throat, teeth, pelvic organs, and so on. Blood counts and cultures, radiograms of joints and jaws, and of the gastrointestinal tract after bismuth meals frequently are necessary preliminaries.

When the place of infection is determined, the next step is, to remove the diseased tissues by operative or other means. These should be examined, to determine the dominant bacteria present. Cultures of these bacteria may be taken for the preparation of autogenous vaccines, which were shown to be of great value in the treatment of cases of this kind. Usually, it seems, streptococci are most frequently found in these cases of arthritis. Bacterins containing from 100,000,000 to 1,000,000,000 have been used, but ordinarily the large dose does not seem to be any more effective than the small one.

The use of the bacterin, according to Doctor Billings, seems to increase the defenses of the body and thereby to add to the probability of recovery. However, dependence upon these remedies alone is not sufficient, and Doctor Billings puts proper emphasis upon such remedial agents as rest, restorative food, pure air, optimistic environment, and graduated passive and, later, active exercise. As a rule, laxatives are required; tonics of iron, quinine and strychnine may be indicated; alteratives, such as arsenic or the iodides, and occasionally, in nervous patients, moderate doses of the bromides; while the salicylates may be used in moderate dosage to alleviate pain.

TREATMENT OF IVY POISONING

While it is rather late in the season for cases of ivy poisoning to happen (up north), nevertheless, it is a good thing to keep in mind that probably the best remedy for this condition is potassium permanganate. A good way to use it is as follows:

The affected part should be immersed in (or bathed with) a solution of this chemical, made as hot as can easily be borne. If the skin is broken, a 1-percent solution is to be used; otherwise, it may be employed in a more concentrated form, according to the location and character of the eruption. A very little of some alkali or acid may be added to the solution. The dark stain produced by the permanganate will wear off, or it can be removed by scrubbing with soap, cautious applications of oxalic acid, sodium hyposulphite, or, better still, a mixture of oxalic acid and hyposulphite.

EMETINE IN AMEBIC HEPATITIS

In Dopter's fine review of the infectious maladies, published in the *Paris Médical* (Aug. 1, 1914, p. 208), we find some interesting observations upon the use of emetine in amebic hepatitis.

The adoption of this drug in this disease

according to Professor Dopter, has brought about some really marvelous cures, and the word "marvelous," as here used, declares that author, is not an exaggerated one; especially so if we can judge by the observations of Gaide and Monzels, in a patient suffering from multiple abscess of the liver, so severe that the authors, judging from their preceding experience in similar cases, believed the patient's death to be certain. This patient recovered his health after emetine treatment.

In discussing cases of this kind, Dopter asks the question: Can emetine alone, without surgical intervention, bring about the reabsorption of abscess contents in amebic hepatitis? He answers this question by reporting upon two patients treated with emetine, in which the fever fell and the hepatic pains subsided, while the abscess itself persisted. Complete cure was not effected in the first of these cases until hepatic puncture and evacuation of the abscess contents were effected. In the second case, the abscess was emptied through the bronchi, following an attack of vomiting.

Dopter therefore agrees with Levêque and Bertrand, that emetine is endowed with an undeniable efficaciousness in tropical suppurative hepatitis. It transforms a living abscess into a dead abscess, and by so doing contributes a powerful adjunct to the methods commonly employed, hastens the disappearance of the disease, and diminishes the mortality from it.

A CASE OF PROGERIA

Progeria is the name for premature senility. Instances of this kind are not common, the first one on record being reported by Jonathan Hutchinson in 1886. In 1904, Gilford reported two others in *The London Practitioner*.

One very interesting case of progeria is described by C. W. Rand in *The Boston Medical and Surgical Journal* for July 16, 1914 (p. 107). The patient was a little Jewish girl, eight years and three months of age. When eight months old she was taken to a hospital, under a diagnosis of rickets. In January, 1913, she was sent to the Massachusetts Hospital School for Children, because it was found impossible to keep her in school, owing to her peculiar appearance. At that time this girl had the expression and general appearance of a woman of seventy-five, rather than that of a child seven years of age.

Physical examination revealed a person of dwarfish dimensions, with double congenital dislocation of the hips, and having every appearance of being an old woman in miniature. Her head was well proportioned, but small. There was a blue network of veins

A Case of Progeria—A Child of Eight

under the skin and a marked cyanotic cast about the inner canthus of the eyes. The arteries were tortuous; the ears were large; dentition was delayed, only seven permanent teeth being present; the neck was thin; skin was loose, elastic, and wrinkled. There was atrophy of the subcutaneous tissues over the entire body, except about the breasts and external genitalia, where there was only a very limited amount. Also, there was a network of small veins underneath the skin over the entire body. Her mentality was about that of a child of seven years. Rand continues:

"She seldom is pensive and only rarely enters into serious conversation with older patients. On the contrary, she prefers her doll and the society of other children. She is

a curious little body, peering into books and investigating new objects with interest, like a gnome out of one of Rockham's pictures. She is very active, cleanly in her habits, shy to strangers, affectionate, and easily influenced."

The appearance of the child is shown by the accompanying picture, which we reproduce from *The Boston Medical and Surgical Journal*.

MUSHROOM POISONING

In September of this year, there was a series of cases of mushroom poisoning in South Chicago, entailing several deaths. This reminds us that the mortality from this cause in the United States really is considerable. In one 10-day period in 1911, declares Bagnall in *The Boston Medical and Surgical Journal* (July 16, 1914, p. 111), there occurred 22 deaths in the vicinity of New York City. In 1905, there were 30 cases, with 12 deaths, and in 1906 there were 15 or 16 deaths. In the city of Hartford (Conn.), where Doctor Bagnall lives, this year (1914) there have been 26 cases of poisoning by mushrooms.

As Doctor Bagnall points out, there are a number of poisonous varieties of mushrooms, but the two forms most likely to produce trouble are the amanita phalloides and the amanita muscaria; the former being much the most likely to cause death.

Amanita muscaria demonstrates its presence by the muscarine symptom-complex [i. e., it stimulates precisely those peripheral structures which are paralyzed by atropine.—Ed.], and the toxic symptoms usually appear within one-half to two hours after the ingestion of the fungus. This is an important point and should be kept in mind. The physiologic antidote is atropine, which is a true specific, and under its use the mortality from this class of mushroom poisoning is very low.

In poisoning with amanita phalloides, the symptoms are of an entirely different character and atropine is absolutely worthless as a remedy. According to Ford, of Baltimore, it contains two poisonous principles—an amanita toxin and amanita hemolysin, the latter a glucoside.

Amanita phalloides is a pure-white fungus growing in damp woods. It has white spores, a nearly white top, with perhaps traces of greenish-yellow coloration around the margin. The stem is bulbous at the base and has the ring below the pileus. It is most often found near oak-trees.

The symptoms following poisoning from amanita phalloides generally do not appear until from six to fifteen hours after its ingestion. Keep this fact in mind, for in differentiating from muscaria poisoning it is most important. In poisoning with this fungus, there is very severe pain in the abdomen, vomiting, intense thirst, choleraic or bloody diarrhea, while the victim gradually wastes away, and dies, in coma, in three or four days. The mortality exceeds 60 percent. It is reported that a third of the top of a small plant has caused the death of a child twelve years of age.

Doctor Bagnall describes 9 cases of mushroom poisoning, one of them in considerable detail; amanita phalloides apparently having been the species eaten. Of these 9 patients, 1 died; but under careful symptomatic treatment, addressed principally to the function of the kidneys, the other 8 recovered. In all these, hot packs were applied for an hour and one-half, every three hours, in addition to the active eliminative methods employed. Castor-oil is said to be the best cathartic here, since the salines may facilitate absorption of the poison.

To repeat: In poisoning with amanita muscaria, the symptoms develop within one-half to three hours at the latest, and the specific antidote is atropine.

In poisoning with amanita phalloides, the symptoms appear within from six to fifteen hours, and we have no specific remedy. Atropine here is *contra*indicated. Elimination is of vital importance, especially maintenance of the function of the kidneys.

TEMPERATURE REDUCTION IN SCARLET FEVER

To reduce the temperature in severe cases of scarlet fever, as well as to relieve the restlessness and delirium, which sometimes occur, Becker (*New York Medical Journal*, August 1, 1914) sponges his patients with equal parts of alcohol and water and if this fails of the desired effect, he resorts to a cold pack or a tub bath. If the latter is employed, he begins with a temperature of 90° and gradually reduces it by the addition of cold water or ice until it reaches about 80 °F. The bath should last from three to five minutes, and may be repeated every three or four hours. In treating hyperpyrexia, an ice-cap to the head may be found helpful.

Becker also suggests irrigation of the bowel with a pint of cold water, containing ten grains of sodium sulphocarbolate. Coal-tar

derivatives and antipyretics should not be employed, because of their depressing action. Not infrequently a dose of castor oil or a laxative saline may work wonders when the temperature is very high. In all forms of scarlet fever he advises keeping the bowels active.

If we may add one suggestion of our own to the excellent advice given by Doctor Becker, it would be the use of aconitine when the pulse is rapid and bounding, as is likely to be the case. This not only moistens the skin and reduces the temperature, but it quiets the patient's restlessness. It may be guarded with small doses of strychnine or digitalin, according to the special requirements of the case. The writer also has great faith in the use of calcium sulphide, given to full effect.

Doctor Becker's suggestion that when there is sudden heart weakness and an immediate response is desired, 1, 2 or 3 grains of camphor, dissolved in sweet almond oil, be given hypodermically, either alone or with a little adrenalin chloride, of course, is excellent.

ODD REMEDY FOR NEURALGIA: ELDEREERRY JUICE

A decidedly simple, though rather peculiar, antineuralgic, discovered accidentally, is announced by H. Epstein, of Prague, who asserts (*Prag. Med. Woch.*, 1914, No. 14) that it relieves rapidly, almost instantaneously, although being somewhat uncertain in action. The cure is claimed not infrequently to be permanent. This is how the author stumbled upon it:

Among the laity of that part of Europe the belief is current that certain brands of port wine will cure neuralgia, and this conviction so obtruded itself upon the author that he became interested enough to investigate—rather dubiously—this matter. Soon the wines reputed to cure were found to be certain adulterated brands the artificial color of which was imparted by the juice of elderberries—a substance (or, also, the pure principle of it) known to be largely utilized for coloring factitious red wines (as well as for fruit-juices).

As a result, Doctor Epstein began prescribing for neuralgic sufferers the plain inspissated juice of the berries of sambucus nigra, still official in Austria, and formerly in great vogue under the name of roob sambuci. (Roob—or rob—designated any inspissated juice of sweet fruits.) To his surprise, he did find this preparation to relieve neuralgia. He prescribed the roob dissolved in (preferably) a strong Spanish wine or else in a 20-percent alcohol; from 5 to 8 drams to be consumed per day. In fresh cases, relief ensues—it is claimed—within ten to twelve minutes (!), while older ones may take three to five days.

Epstein actually considers this elderberry juice a specific, but only for genuine neuralgia. If no improvement follows, it is not a case of true neuralgia; and, if it grows worse, one is dealing with a neuritis.

This is a rather puzzling presentation. All the other parts of the shrub possess positive pharmacodynamic properties, and these based upon known principles. (Cf. the Dispensatories and Materia Medicas.) The berries likewise have enjoyed an age-long reputation for curative properties, but their chemistry and systematic pharmacology leaves us in the lurch. All that we can ascertain about them is, that the berries contain citric and malic (and perhaps other fruit-) acids, in combination with potassium, sugar, gum, fat, tannin, peculiar coloring-matter, and a "dark-brown resin"; and all these determinations are several decades old.

As to their medicinal virtues, the modern textbooks mostly have little or nothing to say about elderberries (indeed, their use virtually has been abandoned); however, in Lloyd's American Dispensatory we find "valuable aperient and alterative properties" ascribed to them, their "juice evaporated to the consistence of syrup" acting "as a purge in 1-ounce doses." The only pharmacodynamic explanation the present writer can extract from the works at command is the tentative one based upon such authors as Kobert, to the effect that all sugars as well as the acid potassium salts of the several fruit-acids operate to render fruit-juices and the favorite "spring fresh-herb cures" mildly laxative. But, then, how about those 10-minute cures of neuralgia with roob sambuci? Autosuggestion?

NEW REMEDIES

Tenosin.—This is a hypodermic preparation put out by Bayer & Co., being marketed in ampules. It is said to contain p-oxyphenylethylamine and b- midoazolethylamine, and is claimed to represent the full activity of ergot.

Yatren.—This is a new iodine compound with an aromatic basis, and is recommended as an efficient bactericide in all infectious diseases, and locally in diphtheria and the like.

Miscellaneous Articles

The Treatment of Pneumonia

There are various ways to treat pneumonia successfully, just as there are for other diseases. Each physician, as a rule, has his special method for any given disease. If I were limited to only a very few drugs for treating pneumonia, my selection ordinarily would be something like the following:

Creosote carbonate, 1 dram, every four to six hours, alternately with fluid extract of saw-palmetto, 1 dram, at the same intervals. Externally, unguentum crédé (15-percent collargolum ointment, Hayden), rubbed in as often and as liberally as needed.

Inhalations always are of value, although they are very much neglected. There are at command various inhalations, to be used from an inhaler vaporizer, or socalled croup-kettle. Purgatives, according to my experience, must be used with care especially in the later stages and near the crisis. As a rule, I prefer enemas in place of purgatives in any stage of the disease.

In bad cases about the crisis, I give one single dose of quinine sulphate of 30 or 40 grains once every twenty-four hours; but the quinine is never used, except in cases that are dangerous and liable to end fatally. In many instances, I have seen the quinine tide the patient over when I felt sure he would die if it were not given; in fact, it has never failed in my cases, except one, where the patient was dying when I first saw him. Recently I had a case of a 6-year-old girl in whom about the ninth or tenth day the fever went up to 104.5° F. She was too weak to cough or talk. She was given 10 grains of quinine once a day for three or four days, which reduced the temperature from day to day until it reached normal.

Baptisia tinctoria also is indicated. I give it when there is any evidence of sepsis, fetid discharge from the bowels, foul breath, and cerebral excitement with a foul coat on the tongue. Of course, there are many other useful remedies for the treatment of pneumonia. My object is not to cover the subject completely, but only to touch on a little that I consider essential and which is not as generally known as it should be.

J. A. Burnett.

Hartshorne, Okla.

[Doctor Burnett's suggestions are good as far as they go, but they do not go far enough. We like better the scheme of treatment presented by Dr. J. M. French in this issue, which we hope will be generally read. The creosote carbonate and colloidal silver urged by Doctor Burnett are, of course, intended as systemic antiseptics. They seem to have value, though they are not specific. Quinine is a stimulant of leukocytosis—and this process is desirable—but the dosage suggested seems to us unnecessarily large. Indeed, we are free to confess that quinine has never seemed to us greatly to modify the course of pneumonia. A better remedy to arouse the defensive forces of the body is the pneumococcus bacterin, which should always be supplemented by that best of all leukocyte stimulants—nuclein.

No treatment of pneumonia is complete which does not aim at reestablishment and support of vascular equilibrium, and this is best attained through use of the defervescent and tonic alkaloids. But that is another story. For details we refer you to Doctor French.—Ed.]

THE NEWBORN BABE—HOW TO CARE FOR IT

"Inanition fever of the newborn" is rather a unique expression, I am sure. The needs or wants of a child soon after birth are the same as later on in life, only a little more difficult to interpret. The cry, the only language of the newborn, is the same for all of its wants, whether hungry, thirsty or uncomfortable from heat, cold, moisture or what not. I instruct my nurses that the cry of the newborn indicates one of three things, hunger, thirst or want of bodily attention. A baby will cry for water as well as for nourishment.

I recall a case which occurred several years ago—it was on the fourth day of the puerperi-

um; the baby had been crying a few hours, and would not be satisfied by its nourishment, which was plenty, or by any manner of bodily attention. On my arrival I asked for a cup of hot water and a teaspoon. I at once began administering the hot water freely to the child, giving about an ounce in all. I then placed the baby in bed and he went to sleep almost immediately, and slept for three hours without wakening. This was all the colic medicine this baby ever received.

I have observed that a large infant requires nourishment soon after birth, more so than a smaller child. Why, I do not know. I advise a half teaspoonful of cream to four teaspoonfuls of boiled water given every four hours until the mother secretes a sufficient amount of milk for her child. A baby should be placed to the mother's breast every four hours, until the milk appears, then every two hours.

A child that is not doped with anodynes or soothing syrups will always cry when its napkin is soiled, and if this is changed at once it will never become chafed. A napkin that is soiled with urine only should always be washed before being used again. If clean napkins are always used, and they are removed as soon as soiled, no dusting-powders will be required, as there will be no chafing.

An infant whose parents are healthy should be born well and does not require medication if properly cared for.

On entering the room of a crying infant which is less than a week old, I always insert my little finger in its mouth. It usually begins sucking the finger at once. In a few instances I have found the mouth very warm, and then I took the rectal temperature and found the temperature to register 104° to 105° F. I have attributed this condition to congestion of some internal organ or organs, resulting probably from some fault in its first bath, which was too prolonged, room too cold or some other condition in which the child became chilled. The first bath should be a grease (usually lard) bath, given under cover or exposing only a portion of the body at a time. Then use a dry cloth to remove the excess of grease. In my early practice, I had two apparently healthy children who died when less than a week old. I did not take their temperatures with either finger or thermometer, but in each case the parents claimed the child had coughed a little. So, I concluded it was congestion of the lungs.

When I find the infant's mouth hot. I take its rectal temperature, which conforms to the finger-temperature. I recall three cases, ages three, four, and five days respectively, in which the temperature was 104° F. or more. I used quinine inunctions, and all responded rapidly to this treatment.

In my private hospital, I have 1-ounce bottles with rubber nipples, and each infant gets its water to drink as regularly as its nourishment. Do not forget the hot water, which is the best anodyne for an infant.

Doctor Douglas asks, "Have any of you ever tried treating the mother?" Yes, and generally with good results except in a few nervous and excitable mothers. I will relate one case.

This woman, mother of seven, had nursed her first and second child, and the third child a few weeks. In the others, the milk would leave as soon as she left her bed. This mother was advised to take—and she did—oatmeal gruel, hot milk (not boiled), or cocoa made with milk, to be taken between meals and at bedtime. She was forbidden to drink coffee or any alcoholic drinks. Her seventh child she nursed until it was nearly a year old, and a fine specimen of a child it was, too.

Some physicians advise nursing mothers to drink porter. This may increase the quantity, but, I am sure, not the quality. Too many babies are bottle-fed and too few mothers are advised as to the proper kind of nourishment. Both the food and drink of the nursing mother should be nourishing, but not stimulating, alcoholic preparations especially being avoided.

E. N. Ritter.

Williamsport, Pa.

VULNERARIES

In the days before antisepsis, treatment of wounds so far as dressing was concerned, made its demands upon the patient's own healing powers, which were to be aided by vulneraries. Then came the Pasteur-Lister methods, which aided the patient not at all, considered the wound-healing application of small account, but did interpose a shield between the patient and extraneous infection. About the year 1895 there appeared the experimental work of some German surgeons, who claimed that the use of antiseptics in infected wounds was of no benefit. (Authorities: the principal German surgical periodicals for 1895.) For centuries there had been in use a plant known as bruisewort. Modern men were experimenting with placental membranes. Now the consensus of opinion is that wounds

require both the shield of the dressing and the reinforcement of the patient's bactericidal products.

The value of the vulnerary begins where the surgeon leaves off, and bruise-wort, or comfrey, has been more or less in use for ages. Nor can anyone who has had experience with this plant be persuaded that it does not possess tissue-building powers. Neither is it strange that those powers should be sought for in embryotic tissues, because the active principle of placental membranes as well as of symphytum officinale (i. e., comfrey) is allantoin. German literature treats approvingly of that plant as a wound-healer, and personal experiment confirms the good results claimed therein. The Americans claim that comfrey will cause the disappearance of sarcoma. I do not believe, because I do not know; but, not knowing, I have not the recklessness to say, "Impossible."

Nature's usual first step in healing an incised wound is, to discharge a thin serous fluid. Attempts at aiding this first step are made by using an "osmotic pump"; that is, by applying some substance of high specific gravity in which an antiseptic is dissolved, and anticipating that germs carried out of the tissues will be killed as are those of external origin. Hence, glycerin and its combinations. Later, sodium chloride was similarly employed. This salt regulates osmosis and imitates some of the functions of blood-serum. Other sodium or potassium salts were mixed with the sodium chloride, until finally Wright, of England, mentioned the advantages of the citrate.

Wright's solution has been widely and successfully used; but it is really a wound-healer, pure and simple, and is devoid of any germicidal influence. It compares well with allantoin, and, in view of the raging European war, is much more accessible. It does seem as if the vulnerary had come into its own again, after all; at the same time the lessons learned from the wave of antisepsis are many and important.

Suppose one were to secure a vulnerary which was at the same time a germicide, yet, free from the drawbacks called irritation. Suppose a mixture existed which was sedative to tissues and attacked neither skin nor instrument. Suppose this preparation would take care of vaginal or dermal injuries so far as redness, heat, pain, swelling, and discharge were concerned. Suppose a surgeon could employ it equally well to treat vaginal gonorrhea or a septic or an aseptic wound, or use it on his own face after shaving. Then it might well be called the surgeon's own powder especially if it were odorless.

There is such a combination, which, when it is brought in contact with an animal fluid or discharge, at once breaks up into Wright's solution, plus aluminum acetate, plus insoluble white lead; and its results are exactly what anyone would imagine they would be when backed up by the most powerful osmotic pump known; namely, cane-sugar, which compares with glycerin as 1600 to 1250 or less.

The experimentation which led up to this combination of wound-healer and protector would make many papers such as this one. There seems to be some difficulty in making the preparation; however, the power-machines experience no trouble. Consequently it would appear to be a question of trituration. Its formula for general use should be as follows:

Sublimate	grs. 2
Sodium citrate	grs. 40
Sodium chloride	grs. 240
Alum	grs. 180
Lead acetate	grs. 360
Sugar, enough to make	ozs. 16

Since writing the above, I have heard that some are using this compound either before or after the usual hand-cleansing procedure, as it keeps the operator's hands soft and pliable. Personally, after returning home from an operation, I make it a habit to take a teaspoonful of the powder in my hands, rub it in thoroughly (it gets wet by rubbing), leave it on for five minutes, and then wash it off with cool water.

DOUGLAS H. STEWART.

New York, N. Y.

THE CAUSE OF PELLAGRA AND TREATMENT SUGGESTIONS

The study of pellagra is now occupying the attention of many able scientific investigators and members of the medical profession. The etiology of this disease has not as yet been settled to the satisfaction of anyone, and the more one reads the many theories advanced as to its cause, the more at a loss he becomes as to what is the correct answer. Many able men now doubt and question the correctness of the maize theory. Many claim the disease is an intestinal intoxication or poison; there are others who claim the blood is first infected by the bite of some bloodsucking insect, quite possibly either the sandfly, the buffalo-gnat or the stable-fly. Regarding this theory, I will say that the disease often is found where neither the sandfly nor buffalo-

gnat exist, and where the gnat appears only at rare intervals, if at all.

The latest theory I have seen is that the disease is caused by a lack of "vitamin" in the system. Vitamin is a chemical body of recent discovery; it has been isolated from the hulls or husk of rice and maize, potatoes, and so on, and is present in numerous vegetables and fruits. The writer claims that Funk of the Lister Institute of Preventive Medicine, London, has formulated a definite conception concerning four vexing trophic disturbances—beriberi, scurvy, rickets, and pellagra—and has coined for this group the expressive collective term "avitaminoses"; which is to say, pathological states determined by depriving the organism of its needful vitamin. Another, more general, name he bestows upon this group is, "deficiency diseases."

In support of Funk's theory, the results of experiments show that, first, vitamin is found in the skin of corn and rice and, where either of these are "milled" and the husk is removed, beriberi or pellagra follow its use as food; while, on the other hand, when the grain is not "milled" (or, we might say, "bolted"), but the husk or bran left as part of the corn or rice, pellagra does not occur.

This theory is new and in the experimental stage, but to my mind it proves that pellagra is an intestinal disease and that the food we eat has a great deal to do with its production, or, I might say, is an etiological factor. It proves to me also that pellagrins should eat only unbolted meal and "unmilled" rice, or none at all.

As to whether the disease is infectious or contagious, this may well come under the head of etiology. I believe most writers on the subject claim it is neither the one nor the other, but my experience and observation incline me to the opinion that it is one or the other, or maybe both.

During the past winter, a negro woman came north from south Mississippi, where the disease is prevalent, and moved into the house with her parents, where there was a large family. The woman was in the third year of pellagra and died in a month or two after reaching this section.

None of her parents' families had the disease before she came; however, during the spring and summer, in four members of this family the disease developed. If the noninfectious and noncontagious theory is correct, how can we account for the disease appearing in this family?

Again, my experience has been that, when it appears in a family, the disease is rarely confined to one member alone. True, we can say that this does not prove either infection or contagion, as the whole family are presumably exposed to the same disease-breeding conditions; nevertheless, this cannot be contended where the disease is brought into an apparently healthy family by someone who has not lived with or near the family and had the disease before he came into the circle.

It is a fact well known to all of us that, unless we can trace the origin of a pathological condition and discover the cause of this condition, we can not intelligently treat the sufferer.

As to the treatment of pellagra, I believe the majority of the profession are of the opinion that arsenic in some form is the true remedy. Why they think so (except from experience), I have not been able to learn. My old friend Dr. J. W. Gray, of Clarksdale, Mississippi, is very successful in treating pellagra with tincture of opium.

I myself have treated several victims this season with Fowler's solution and tincture of opium, in connection with a free vegetable and fruit diet, withholding corn (in any shape) as much as possible. So far, my patients have recovered. Whether the disease will return with the next spring is to be seen.

As I am strongly inclined to the opinion that the cause of the disease is a toxic poison in the digestive tract, I believe an intestinal antiseptic is indicated, and I had resolved to give calcium sulphide a trial in my next case. I fondly imagined that this idea was an original creation of my own fertile brain; before I had an opportunity to apply it, though, I read an article in a medical journal in which this remedy was lauded for that very purpose. I now have (August, 1914) a negro child, aged three years, sick with the disease, and I am giving the remedy. I am watching results with a great deal of interest.

In a recent issue of a medical journal, a writer says that "good results are also said to follow the use of living Bulgarian-bacilli cultures."

"Dr. Wm. L. Law says that in the last five typical cases of pellagra he has treated he has prescribed the Bulgarian lactic-acid bacilli in tablet form, two tablets being taken half an hour before each meal and at bedtime. He further tells us that the improvement in appearance and subjective symptoms

of these patients warrants this preliminary report."

After reading all the literature upon the subject I have been able to procure, I have come to the conclusion that the only reason any of us can give for using the remedies we do in treating pellagra, is the one given me by an old doctor friend of mine, many years ago, when I asked him just why he prescribed certain remedies in his treatment of pneumonia. Said he: "Because they do good."

Aside from all theories or science—and both are greatly to be admired—is it not the duty of every physician to prescribe those remedies that, from his own experience or that of others, he knows will relieve his patient? Is not the experience of all of us in treating pellagra good evidence that none of us are as familiar with the medicinal properties of the drugs we are administering as we should be? And, then, should not this experience be an incentive to every one of us to study therapeutics and learn all there is to learn of their curative properties?

H. C. Buck.

Friars Point, Miss.

[Unfortunately, Doctor Buck's conclusions regarding the empiricism of all our methods of treating pellagra seem to be correct. Not knowing what causes the disease we have to proceed in an experimental way, and if our success is not all it should be this is not to be wondered at. In this connection I want to call attention to some work recently done by Goldwater, of the Public Health Service, who believes the disease to be of nutritional origin. This supports the hypothesis of Doctor Pixley, of Winnsboro, South Carolina, who has written upon this topic in Clinical Medicine, and feels sure that proteid starvation, plus excess of fats in the foods, is at the bottom of the trouble.

There are simply "scads" of alleged cures for pellagra. Of course they all fail at times—most of the time, some would say—yet there are a few which are being much used, with apparently good results. Among these we may mention calcium sulphide, first recommended by Mizell; the intestinal antiseptics, as urged by Bowling and Torbett; the arsenic preparations of various kinds—which, however, seem of indifferent effect; and quinine hydrobromide. The last-mentioned remedy has recently been recommended by Isadore Dyer, of New Orleans, who, in his address before the Texas State Medical Association, stated that he had treated one hundred cases with this remedy without losing a single patient. An abstract of this address will be found in the "What-Others-Are-Doing" department, this issue, page 1002.—Ed.]

SOME CASES OF PELLAGRA: HOW THEY WERE DIAGNOSED AND TREATED

I shall in no wise attempt to review all the theories and discussions regarding pellagra that have been printed, but will tell my own little story as plainly as I can, supplying illustrations to make my points clear and presenting cases in which there were cures, as well as fatal terminations.

Pellagra is a known entity, but an unknown quantity; it is tropical and semitropical in its scope, and spreads into almost every climate and flourishes in almost every country, especially in this of ours. What it is, is not told, and where it is, is evident.

A victim of true pellagra, when well developed, is a hideous sight. And how is it diagnosed? By an eruption on the hands, feet, face, neck, and back like unto sunburn, appearing on the exposed parts first. It burns as a sunburn under the direct rays of the sun, and it appears at the beginning or during the hot season of the year, or from April to November, usually first appearing in May, June or July, and each succeeding year coming on earlier and remaining longer.

Now, the sunburn which grows "scurvy" and dark, sometimes underlaid with pus, makes us call it pellagra. What did we have before the sunburn appeared? Pellagra? No! Neurasthenia? Eczema? Hysteria? Is it not presumptive, that if we have pellagra last we had it at first, minus the skin symptom? Then, if we had it at first, have we not on hand many cases without the skin symptom? Look about you, brother; for, an early diagnosis is all-important in curing this disease. Indeed, I find the recent cases are very amenable to treatment, and that treatment is rational and almost specific—more so than quinine in malaria, since not all these victims are cured with its specific quinine, no matter how administered.

Let us look at our cases of pellagra and trace the symptoms, using as an illustration some very interesting cases treated by me. An old gentleman began by telling how he felt five or ten years previous to and dating up to July, 1911, when I saw him. He was sluggish, had a peculiarity to himself, was constipated most of the time, had indigestion, liver was inactive, had lost virility, was quarrelsome, had cachexia, skin of a

bronze character. dimness of vision, weakened memory, friends seemed foes, kidneys were wrong, appetite was absent or perverted, craved salt, and in 1910 he had sunburn and diarrhea; but, he was getting somewhat better that fall, only to have it begin again next February.

I first saw him in June, when he was almost bed-ridden, had incessant enterocolitis, which was pronounced tuberculous by other physicians, while the sunburn was called eczema. He was given up to die. He had three lumps in the abdomen and wanted me to lance them.

My microscopical finding of the feces showed intestinal parasites, most of which were ankylostoma duodenale and ascaris lumbricoides. When I told him so he laughed at me. The results of my treatment on the homeopathic scale made me feel as if my microscope had made me lie, so I gave thymol in 1-dram doses, and then gave santonin, a 3-grain dose. This dose of santonin did no good. I gave 4 grains, but to no avail. I gave 6 grains of santonin, and the worms began to wake up, so much so that the fellow "pulled many out of his nose and mouth"—meaning the ascaris lumbricoides. Then I gave him 6 1-2 grains, and he passed a half gallon, and the lump he wanted me to lance in his "stomach" disappeared and his pellagra also. And so it was with most of his family of seven.

Two of the family, girls, died before I could obtain results, because of playing with the disease or too small dosage; for these were my first cases. The remaining 5 in the family have had no treatment for pellagra since 1911 and all are well today—except that the wife must have a fibroid tumor removed next Monday.

In all, I have treated some 30 victims, and now have 12 new cases on hand who are doing nicely. Not all have the hookworm or ascaris lumbricoides, or any particular thing, but they do have an infected alimentary tract.

It is a trouble which has an affinity for mucous membranes and epithelial cells or surfaces and at first seems to deal only with this part—or embryonic tissue—and directly and indirectly. Directly, by the cause in the gut, and indirectly on the skin, through the sympathetic system; but the effect is intoxication, and to be intoxicated there must mean an intake of toxins, or an absorption of putrefactive or toxic material intaken, or putrefied and absorbed in the alimentary tract, or the improper absorption of food intaken, or an interfered drainage and retention of waste, or end-products in the body-chemistry.

Now, again, all these patients here have a living foreign body in the alimentary tract, and these denude the intima of the bowel, cause the mucous surface to weep, and destroy the function of the lacteals, the peptic and acinous glands of the stomach; the bile and pancreatic fluid are *nil*, and the intake of nourishment becomes a foreign body, putrefies from the intake of bacteria not killed by nature's defense, the juices secreted and excreted by the intestines. The consequence is, a saprogenic condition, or bacteria preying on dead material and nematoids on live material, the gut, and, instead of the food being sucked up by the little lacteal pumps, this mess of rot is being absorbed by a denuded surface. Instead of its going directly into the receptaculum chyli, it goes directly into the blood and lymphatic streams and the condition becomes akin to sapremia, yet is not.

Why does the disease show like a burn on the surface? Through the sympathetic nerves and starvation. A severe burn causes death in three ways, and one is, sloughing and hemorrhage of the duodenal glands. Then, if a burn will cause this, what will sloughing or aggravation to the duodenal mucosa cause on the surface?

Then, with a denuded bowel surface, blocked bile and pancreatic ducts, with a foreign body, either living or dead, or both, to keep up trouble, and destroyed lacteals; what would be the result? Everything—and a pellegrin has everything sooner or later; and the severity of the disease depends upon the severity of the destruction and degree of toxin absorption.

One victim I have had on hand for seven years showed the sunburn only last summer, also the diarrhea, and then became demented Did this woman have pellagra seven years ago? Sure! She is a mulatto, mother of seven children, and her last pregnancies were accompanied by various severe symptoms such as kidney trouble, hysteria, and so on. She formerly was severely constipated—an early symptom in most cases—and had the sunburn only last year. Finally she became insane. Two of us signed for her to go to the asylum, but her husband protested, and now, July 15, 1914, to my astonishment, she is not insane, nor has she diarrhea or sunburn.

I have seen the severe sunburn in many of my cases, and constipation instead of diarrhea;

or severe diarrhea with only a slight eruption. Several victims have had cholelithiasis. I think there was just inspissated bile and no calculi; for, since they have gotten well of the pellagra there are no more gallstone symptoms.

The blood shows depravity and inflammation or irritation somewhere, and that somewhere is in the bowel. Hemoglobin down to 40 percent, red cells decreased and the leukocytes somewhat increased, or relatively so, with the mononuclear cells increased. There was no hydrochloric acid in the stomach at any time, or only in small quantities, because they are almost, if not quite, chlorine-free; having one of the chemicals destroyed and thereby the body-chemistry thrown out of balance. The mere inspection of these patients will show they are out of balance. The mental indifference is a constant symptom. There is a catarrhal condition of all the mucous (epithelial) surface sooner or later. Patients are careless and unconcerned about themselves and would as soon die as live, except the children.

Then, again and again, if you block the avenues of secretion, excretion, and absorption, and besides introduce foreign poisonous bodies, as in this disease, what will be the consequences?

A. L. Nason.

Maben, Miss.

[Doctor Nason's ideas and his methods of treatment are most interesting. We hope others will investigate pellagra along the same lines, though we want to offer a word of warning concerning the use of santonin, which in large doses may be toxic. Also. we take this occasion to call attention again to two other remedies of proven value—calcium sulphide and quinine hydrobromide. See the comment on Doctor Buck's article just preceding this one.—Ed.]

HOW TO CURE UMBILICAL HERNIA IN BABIES

For fifteen years, in treating umbilical hernia in infants, I have applied a cotton roll and bound it down with adhesive straps. Unfortunately, when the straps were removed, they took the baby's delicate skin with them. The button treatment has failed in my hands.

An important case came to me some time ago, but the hernia soon recurred. One year later the parents told me that a nearby colleague had cured "baby" with an "air-cushion" rubber umbilical truss. I began its use, and this simple device has never failed me since. It gives no annoyance to the baby and one one-dollar truss will effect a cure. These trusses can be secured from any physicians' supply house.

J. B. Dunham.

Wenona, Ill.

WHO HAS HAD EXPERIENCE WITH GELSEMININE?

Dr. John M. Shaller, of Cincinnati, who of course is known to every reader of this journal, makes the suggestion that we ask our readers to tell of their experience with the alkaloids of gelsemium (gelseminine and gelsemine). These communications should include the citation of cases, reasons why the drug was administered, what symptoms called for its use, and what were the results, good or bad.

We herewith pass this request along to our readers and urge that everyone having information to offer be sure to write us, giving fullest possible records of their experience with this remedy. Gelseminine we consider one of the most valuable of the alkaloids, and we want to know to what extent our readers agree with us.

THE RED CROSS APPEAL

As doubtless every reader of this magazine knows, the American Red Cross society has already fitted out one ship with supplies for the sick and wounded of the European battlefields. Thirty-three surgeons and 127 nurses have been sent abroad. The calls for help are many, and to keep the work of relief going much money will be needed. We print herewith the appeal of the Red Cross War Relief Boards.

During our war with Spain thousands of dollars were sent by the European Red Cross Societies to the American Red Cross to aid in the care of our sick and wounded soldiers. Now, in the hour of their supreme need, the American Red Cross, both for the sake of humanity and to express our gratitude for their aid to us in the time of trouble and distress, has decided to charter a ship and send to each country involved, doctors, nurses and hospital supplies.

This ship, sailing under the Red Cross flag, will be under the protection of the Treaties of Geneva and The Hague, and can enter any harbor for the discharge of its beneficent duty. In no other way can this trained personnel. so greatly needed, reach the different countries. Protection is provided also for the personnel of the Red Cross Societies of neutral states that render aid by the Treaty of Geneva. The American Red Cross appeals most earnestly to all of our people; to the governors of states, as

presidents of the Red Cross state boards; to the Red Cross Chapters, to mayors of cities, to chambers of commerce, to boards of trade, and to all associations and individuals, for contributions to carry on this work. Contributions may be designated by the donors, if they so desire, for the aid of any special country, and will be used for the country designated; but assistance will be given to all, in the true spirit of the Red Cross represented by its motto, "Neutrality—Humanity."

Grieved as we may be over this terrible war, the agonizing cry of suffering men cannot appeal to us in vain. The American Red Cross asks for a prompt and generous response. Contributions may be sent to the American Red Cross, Washington, D. C., or to state and local treasurers of the Red Cross.

NOVEL TREATMENT FOR HEAD-LICE

Dr. Edward G. Hutterer, of Sanborn, Iowa, referring to the various articles that have appeared in CLINICAL MEDICINE relative to the methods of destroying head-lice, writes to say that he wants the members of the "family" to try oil of anise. He declares that a little of this rubbed into the hair will "fix them," sure. However, as a rule it may be best to dilute the oil a little, since otherwise it may cause some burning of the scalp. The application will destroy not only the lice, but the nits also. We pass this suggestion of Doctor Hutterer's along to our readers, with the request that all having an opportunity give the anise-oil a fair trial and report through these pages.

EMETINE FOR HEMORRHAGE

No doubt many problems confront members of the profession daily, the solution of which requires considerable attention, but I am free to confess that among our various perplexities the ones that have given me the greatest concern have been in the treating of hemorrhages. At present, I wish to report several interesting cases successfully treated with emetine hydrochloride.

The first patient was a baby boy 14 months old, suffering from an infantile form of scurvy (Barlow's disease) following the prolonged use of condensed milk. The child had lost considerable weight and was anemic, showing a count of 3,900,000 red blood-cells. The tongue was slightly swollen, the lips were dry and fissured, the gums were quite spongy, but at this time showed no signs of bleeding even when rubbed. The skin was dry and pale, with ecchymotic patches, beginning on the dorsum of the foot and extending over edematous ankles almost to the knee.

Owing to the child's extreme weakness, emaciation and diarrhea, my attention first was directed toward regulating the diet. The mother had been unable to get anything to agree with the child. Food was withheld for forty-eight hours, the bowels were cleaned out, and Bulgarian bacilli tablets were given freely. I tried modified milk, but the child was unable to digest that, and it grew steadily worse. The diarrhea was aggravated, and there occurred slight hemorrhages from the bowels and nose. Calcium chloride and calcium lactate were given, to increase the coagulability of the blood. The hemorrhage from the nose became alarming. An anterior pack soaked in adrenalin chloride temporarily stopped the bleeding, but it was only a short time until I was called back and the posterior pack was put in. This was efficient for a brief period, but the hemorrhage from the bowels grew steadily worse. At this time the blood showed R. B. C. 1,900,000. Hydrastinine and ergot were of no benefit.

I was familiar with emetine for the treatment of amebic dysentery and knew that tuberculous hemoptysis had been successfully treated with it (Flandin and Joltrain, *Gazette des Hôspitaux*, April 17, 1913). I gave, as a last resort, emetine by mouth until the baby began to vomit. As a result, the bleeding had entirely ceased within a short time.

Another case was that of a girl 19 years old, who had extremely severe nosebleeds. On several occasions the posterior pack was necessary to control the hemorrhage. The blood-vessels in Kiesselbach's area had been cauterized, and calcium and also hydrastinine hydrochloride were given; but the hemorrhage continued. Emetine given to the point of nausea immediately stopped the bleeding.

LANNING E. LIKES.

Lamar, Colo.

IS PELLAGRA DUE TO AN INTESTINAL PARASITE?

I wish to report to the medical profession an animal parasite found in the feces of pellagrins. This parasite appears in six different forms, only one or two forms being noticed in most of the specimens examined. The first and most frequent form is that of a very small black organism, oval in shape, which develops into a second form, that of a coccus which is light in color and has a distinct capsule. This form is about one-thirtieth as large as an ameba. The third form is an elongation of the second into a

club shape. Fourth, is a bacillus developing from the second and third. Fifth, a spirillum developing from the second, third or fourth form. Sixth, a pigmented spirillum breaking up into dozens of the first form. In all these the parasite is motile, and development from one form to another has been seen. Only in advanced cases of pellagra that have had very little treatment do we usually see all of the above forms.

The parasite has been associated with severe cases of dysentery for the past three summers, two of the patients having died later of pellagra. It has been found in the feces of a second case of pellagra developing before any clinical symptoms except dysentery had appeared. I have found the parasite in twenty-three different cases of pellagra examined. Repeated examinations of feces of healthy individuals lead me to believe that the parasite is not an inhabitant of the normal intestine.

B. W. PAGE.

Lumberton, N. C.

THE ACTIVE PRINCIPLES OF THE HYPOPHYSIS CEREBRI

Some years ago Houssay, of Buenos-Ayres, obtained a crystalline substance from the pituitary body; but this was not isolated in a state of purity. Later, Baudouin and Choay (*Soc. Biol.*, May 31, 1913) obtained a white crystalline product much purer than that isolated by Houssay and preserving all the physiologic properties of the pituitary gland; 200 Grams of the fresh gland yielding 40 Grams of the dried extract, and 80 milligrams of a crystalline active principle.

The latest work on the subject is that reported by Fuhner (*Deut. Med. Woch.*, 1913, No. 11). By an elaborate process, this investigator has been able to isolate from pituitrin a long series of crystalline substances, the four principal ones of which are:

(1) A crystalline body possessing the typical action of pituitary extract on the blood pressure, while its action on the respiration and on the uterus is feeble; (2) a body having a strong action on the blood pressure, uterus, and respiration; (3) another body, having a powerful action on the blood pressure and respiration, but most powerful in its action upon the uterus; and (4) a body which has only a feeble action on the blood pressure and respiration, while its uterine action is powerful. In addition to these, four other crystalline bodies have been extracted which have no demonstrable therapeutic action.

While these bodies separately have not been found to be superior therapeutically to the pituitary extracts, the fine chemical work of Fuhner certainly is most interesting. Altogether, although the pituitary body (or its extracts) exerts a more or less decided action upon blood pressure and respiration, thus far its best field of utility seems to be as a stimulant of the uterine muscle.

FROM A TRAVELER IN AUSTRALIA

Kentucky hospitality, through the eyes of my boyhood, was something not to be excelled. Both of my parents were Kentuckians, and in my early youth I heard much and often of this great characteristic of the home of my ancestors, and on several occasions I had opportunity to taste of the same. Alas! I have lived to see Kentucky hospitality outdone.

Arrived in Australia to attend the annual meeting of the British Association for the Advancement of Science, I, being a "distinguished visitor from over seas," was given a first-class pass—including sleeper and, in some instances, meals by the government—over all the government railways in the colony (about 19,000 miles), and good for six weeks. "Wouldn't that jar you?" Besides this, I was given free entertainment for a week in each of the four capital cities. Everything was opened up to us, the overseas members. Some cities gave us *carte blanche* to their street-car systems and to many other things; in fact, to almost everything.

The Association spent a week in each of the four largest capital cities. At each place we were given a reception by the governor and the mayor, and by many other individuals or societies. The week-ends were always devoted to excursions in the vicinity of the city where we happened to be. Provisions were made for some ten or fifteen of these excursions, so that one could choose the one which best fitted his tastes. And all of this in spite of the fact that the country was involved in the war of the Empire. The visitors chanced to arrive simultaneously with the declaration of war against Germany. Had it come a month sooner, it would have spoiled the meeting to a great extent. As it was, the visitors were here, the arrangements were made, the money had been collected. Of course, the war cast something of a damper over the meeting; dancing, for example, was cut out. But, as Sir Oliver Lodge, the retir-

ing president, said, "had the hospitality been greater, we never should have survived it."

To show the true state of Australian hospitality: Several German university professors had been invited to attend the meeting as guests of the Association. They came just in time to learn about the declaration of war against their country. Nevertheless, they were shown every consideration and even special honors, for, in science all men are brothers at all times. Every effort was made by everyone to make the delegates from Germany feel at home, as no doubt they wished they were.

At the house where I was entertained in Sydney, there also were as guests a German and a Russian, while the host and hostess were British. The German and the Russian dined at different times, but occupied the same chair at the table. In the presence of the German, the others carefully refrained from war-talk, though full of it. Two of the Germans were reservists, but the Association interceded with the Government to allow them to depart in peace by way of Java; which they did. They were unable to draw upon their home banks, so, the Association volunteered to sustain them till they could hear from their bankers.

The Australians are a free and open-hearted people, and not so conservative as the English. They are very loyal to the Empire, an Englishman told me; much more so, in fact, than the British at home. You can hear that pure cockney English here just as one does within the hearing of Bow bells. Although this island continent is located at the other side and other end of the world from home, Australian hospitality has made me feel very much at home; still, it has not freed me from the wish that I were back at home.

Australians are quite English, "you know"; nevertheless, like ourselves, they are making numerous radical changes in the King's language. The good old English word "paddock," which in England means a small lot or field of an acre or two, in Australia is used to mean anything up to ten thousand acres. But, then, Australia is a big country. The word "mob" here denotes cattle, sheep, horses, in the sense that we speak of flock, drove or "bunch." "New chum" is equivalent to our tenderfoot or the Hawaiian "malihini."

Railroads, in Australia, all belong to the government, or, rather, to the state. Each state of the Commonwealth has its own road and its own gauge. One must always get out and change trains at the state line; which, to say the least, is something of a nuisance. The states are trying to come to an agreement in the matter of gauge.

Australia is about the only country I have been in in fifteen months' traveling where not everybody is hoping some day to get enough money to leave for America. Australians are pretty well satisfied at home. They certainly have one thing in abundance, and that is room. The distances are truly magnificent. An ordinary ride to a neighboring city is one of eighteen to twenty-four hours by train.

Winter in Australia is a farce. I have not seen snow or ice here, though I was here through one winter month and a part of another and have several times been at an elevation of 4000 feet. At the beginning of August I saw the fruit-trees blossoming, after having a little while before seen them in bloom in April and May in Japan. Most trees keep their foliage all winter. There are a great many palms and other tropical growths found in all latitudes of this country. Many people in Melbourne, Sydney, and Adelaide have never seen snow, though they have lived there for a generation; although snow can be seen on some of the highest of the mountains.

For all that, I have suffered keenly from the cold in Australia. People here do not prepare for cold weather; ordinarily, houses, hotels, and public halls and places are not heated at all. There is no preparation for heating, and an American will become thoroughly chilled if he sits quietly in one of these unheated rooms for an hour or two. We Americans, of course, overheat our houses; but the Australian underheats, or, rather, does not heat at all, as a rule. In some houses and in a few offices or hotels you will find an electric heater that looks very pretty.

Speaking of fire, brings us to fuel—and fuel here ordinarily consists of wood. Australians, as do we of America, although longer settled, are ruthlessly destroying their forests. However, this timber is poor, at best; the trees being thin and scraggy. All through the country you see trees which have been "ring-circled"—we call it "deadened." They do this so that the grass, unshadowed, will grow better. When time permits, maybe years later, these trees are cut down and sawed up for fuel or lumber. They should be planting trees instead of ruthlessly and wastefully killing them. Australia needs men, moisture, and forests. The third of these factors causes and controls the second. Why should

men who see how dry Australia is destroy what helps to bring moisture to the soil?

Australia, geologists tell us, is the oldest land, geologically speaking, on the globe. Mount Kosciusko, Australia's highest peak (6000 feet), was the first plot of old Mother Earth to rise from out of the flood. Geologists attending the British Association for the Advancement of Science reaffirmed this fact.

Australia may be an early riser, but she is slow in one respect. I have seen more whiskers in Australia than in any other country, except Russia. The people that wear whiskers in this aseptic age are backward in a sanitary way. I do not wish it to be inferred that Australia has not taken a bath since she emerged from water eons of ages ago; her men, though, should shave. The young ones do, the old and middle-aged, however, often do not.

I was surprised to find one capital city, Brisbane, which practically has no sewerage system—using the pail system, as they do in India, China, and Java. They are talking of remedying the matter; but they should have done so many years ago. Returning to whiskers—the King George style are popular; so are the President Poincairé ones. One meets a few Abe Lincoln's and an occasional Paul Krueger, while General Salvation Army Booth's are quite frequent among the aged.

What do whiskers have to do with whisky? I do not know; still, there is more whisky and other strong drink, also weaker brands, consumed in Australia than in any country that I know of. The drink-question here is much what it was in England thirty years ago, and that was bad, much worse than at present.

I have seen more sheep in Australia than ever in my life; they count their sheep here by the square mile. Everything is big here. I have traveled 6000 miles by rail in Australia, and then have seen only a small portion of it. It is nice to have a pass. I haven't had one since I was a boy and in the newspaper business, in those good old days when everybody about the newspaper had a pass. What is worrying me is, the thought of those other 13,000 miles over which this pass was available but which I could not reach.

Federal election day in Australia was on September 5. It was very quiet, the war overshadowing all else. However, the Labor Party won out as usual. An interesting thing was, the voting-booths at prominent railroad-stations, so that the traveling-man could vote while he was traveling; thus not depriving him of his vote because of being obliged to be away from home.

The poet who said that Australia is a land of "bright scentless flowers and songless bright birds" was wide of the truth, even for this wide country. True, both kinds are here, but there are many other flowers and birds that deny the allegation. I was surprised to find the trees and forests full of parrots; so full, in fact, that boys are hired in the fruit season to shoot them—they are such a menace to the fruit crop. Indeed, parrot pie is one of the delicacies.

Rabbits, foxes, and prickly-pear are three scourges, having been introduced into Australia and then having multiplied beyond all reason. The foxes eat the young lambs and the poultry, the rabbits kill the fruit-trees, and the prickly-pear is taking the country. The eradication of these three pests is a great problem.

E. S. McKee.

Cincinnati, O.

THE MEDICAL DOXOLOGY

I wish to express my pleasure in being here tonight and having been placed on the program with the good fellows who have preceded me, and whose speeches have been so enjoyable.

Webster defines the word "doxology" in the words, "opinion, glory, praise," and adds that it is usually applied to a short song of praise to God. Therefore, when you sing the doxology, you express your opinion and give glory and praise.

My opinion of the medical profession is a private matter. My opinion of the men, and the women too, of the profession, is grand and exalted. I know men in our ranks who are as proud as Lucifer, as bold as a lion and, yet, as gentle as a woman, men of great wisdom, high character, honest intentions and ideal lives; men who would give honor and uplift to any calling to which they might belong. And I believe that if every good doctor were also a good Elk, the Elks would be absolutely the best people on earth.

As to glory, we can proudly claim our share brought to us by and through McDowell, Dudley, and Pasteur, and many other noble souls who have given their lives to and for the medical profession.

As to praise, that is scant. There is little praise for the individual or for the mass of medical men. In fact, there is more praise in the profession than out of it. I mean by that, that one good doctor will praise another

doctor far more frequently than does any layman, and will do it honestly and with the best of sentiment. Only now and then you will find an honest soul who will praise the doctor who has served him well. But they are few and as hard to find as gems in the depths of the ocean.

The doxology comes at the end of things, at the end of the sermon; and my speech comes at the end of this royal feast and it seems to me that the Creator had an eye to the end of things.

There was an end to Creation itself, and when it was finished He rested from all His work. There is an end to the verse, an end to the chapter, an end to the book. There was an end to Napoleon's dream of empire. There was an end even to the beautiful sermon on the mount. There was an end to the material glory of Solomon's temple, and an end to the still more glorious reign of King Solomon himself.

And I believe that the angels and the archangels and the redeemed of men will sing the doxology at the end of time.

There will also be an end to the arduous practice of medicine, and the chosen few then left will indeed and in truth sing the doxology of medicine.

It will come through higher education, through sanitation, through preventive medicine, through the *alkaloidal* and serum treatment of diseases.

And, way along down the aisles of time the anxiety, the dread and the trouble of the practice of medicine will grow lighter and lighter until the advent of the glorious dawn of the millenium—when there will be no more sickness and no more death.

J. A. Freeman.

Crestwood, Ky.

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[The preceding article we reprint from *The Kentucky Medical Journal*, of August 1.—Ed.]

MORE ABOUT LATENT EYESTRAIN

Much has been printed in recent years in publications of every description, professional as well as lay, regarding the hurtful influence that errors of refraction exert upon the mental and physical wellbeing; but, the discussions confining themselves almost altogether to subnormal vision, so very little has been said about latent defects that this phase has passed almost unnoticed. A refractive error of half a diopter, yes, even of a fourth, is credited with producing all manner of ills, from headache to hysteria, hallucination, and epilepsy.

As already stated, much comfort is experienced from the correction of visual errors; however, it is not the refractive errors of any amount that could produce such ills. It is not what the eye may manifest, but what it is able to hide, that acts as the cause.

Eyes which maintain normal vision not only may have defects of a high degree, inclusive of the oculomotor muscles, but often manifest, on account of strain and spasm, the very opposite of their true defect.

When finding irregularities in any of the eye-muscles, one must look for still further defects, defects that will become manifest slowly during the course of a long period of treatment. It is this and the reverse class from which the most serious nervous disturbances take their origin, and not the manifest errors. It has also been proven clinically over and over again that latent defects may exist to a high degree and, yet, be undiscoverable by the use of mydriatics.

The socalled correction of muscular imbalances must not be confused with the method of repressing abnormal innervation; for, one is not a modification of the other, and, although both methods of treatment are through the medium of the eyes, it would be as absurd to confound them with each other for that reason, as it would be to confound the different schools of medicine because the remedies are applied through the medium of the mouth.

It has been quite generally believed that, if a muscular imbalance is found, it should be corrected with prism 1-4 to 1-2 of the amount found. But this procedure is absolutely erroneous, since the muscular imbalance cannot be determined by any diffusion-test whatever, because the amount shown may be only a small part manifesting itself, or it may be a reverse manifestation altogether, or no muscular imbalance may show at all and still be present to a high degree.

It is obvious that in defective eyes a continuous effort is made to see as perfectly as possible, and when necessary the nerve-centers innervate to their utmost power the various muscles, thereby causing a change of shape in the crystalline lens, which stretches or shortens the recti muscles. As the eyes are anatomical cameras, the visual center of the brain endeavors to obtain a clear picture.

When all the facts are considered, we can readily see that we have more or less firmly fixed conditions that will recede only gradually

and thus permit the eye slowly to assume a normal state. The tonus of the muscles not being rigid, it therefore is impossible to correct the same at once by fitting such glasses as produce the most perfect vision. Such procedure very often is incorrect, inasmuch as it stimulates the maintenance of abnormal conditions that as soon as possible ought to be discovered and corrected.

For this reason, many people experience great and repeated trouble in their desire to have their vision properly corrected. They pass on from one professional man to another, and each correction received proves but temporary, although it is probable that each correction was made scientifically and remedied all the errors that the eyes manifested at the time of correction.

Eyes that are capable of prominently manifesting their defects are more or less at rest when not in constant use at near point by reason of indistinct vision; whereas absolutely latent eye troubles have no such periods of relief.

Many people with good vision become very much exhausted and nervous or perhaps sleepy from the use of the eyes for only a short time in close application or where constant attention is required, as in a theater, and some are more exhausted by one hour of such effort with the eyes than they would be by many hours of actual labor or after many miles of walking or climbing.

The reason why so little, so far, has become known concerning latent eye defects and the treatment through the sight-centers is, that our observations have been—too much so—confined to manifest defects (and these at best represent but a very small percentage of the disturbing conditions); and, further, because scientific fact often is slow in becoming established. And this may be especially true in a field of preventive as well as curative practice, when we consider that the science of refraction was still in its infancy not so many years ago.

It is also common and natural to travel in beaten tracks. New theories, however, are valueless unless they give proven results. It is given to but few to establish new truths, and it has not been given to me so to do. Therefore I could not add anything new to the subject of latent defects that has been told in the works of Dr. Chalmers Prentice. The only new material I could add thereto would be reports of my own cases, but these would be new only in point of view as additional reports, and not new as to conditions and results obtained.

The tendency in life is either to exaggerate or to minimize.

The hypochondriac often simulates diseases and makes fanciful claims. Then there is another class, with whom the pendulum swings to the extreme in the opposite direction. He will deny all pain and, admittedly, thereby lighten his burdens considerably. This, of course, works best in those who have no derangements whatsoever. However, while we admit that the mind influences the body, we deny that an ill body which also produces a tired and fagged brain is capable of thinking clear, logical thoughts, and much less can cure bodily ills by denying their existence.

We admit that nerve-force wasted through improper functioning of the eyes depletes the nervous system, but we deny that the best-fitted glasses are all that is necessary.

Adolf Tschumi.

San Francisco, Cal.

THERAPEUTIC USES OF PILOCARPINE

While making some studies, in 1874-5, at the great Misericordia Hospital in Rio de Janeiro, Brazil, I found its staff making use of a plant native to that country, jaborandi. An attack of yellow-fever interrupted my work, and, so, I had not the honor of introducing this important drug to the medical profession of my country. The remarkable powers of this new drug aroused considerable interest at the time, but, in common with all other articles of the materia medica, it has been allowed to fall into neglect. Nevertheless, we have in this plant a remedy of too great and powerful properties to be thus cast aside.

For a time jaborandi met the same difficulty that has ever stood in the way of a really scientific therapeutics and left us now, after thousands of years of medical practice, in an archaic state, similar to that of metallurgy before the days of Tubal Cain. The preparations of this plant were like all the other plant-preparations—uncertain in composition, strength, and activity, so that some specimens exercised an influence over the body functions diametrically antagonistic to that exerted by other preparations of the same plant.

This difficulty has been dissipated by the chemist. We now know that the powers of jaborandi reside in two groups of alkaloids, the antagonism of which is phenomenal even among the plant-principles. While the pilo-

carpine group powerfully stimulates the secretion of sweat, saliva, mucus, ear-wax, and breast milk, the jaborine group exactly reverses this action and dries up those secretions.

The preponderance of either group depends upon conditions of the plant's growth, such as light, moisture, soil, temperature, time of gathering, and so on. The only way to know what the drug would do was to try it, not on "the dog," but on the patient; a very undesirable method, since jaborandi often was employed in cases demanding instant and decisive therapeutic intervention.

The therapeutics of jaborandi is at present that of pilocarpine. The other alkaloids of the plant are unknown to the clinician. Some day we may rake over the heap, "the tailings of the mine," and find there enough to repay us for the effort. Whether jaborine is to be classed with strychnine or with atropine is a question that probably could not be answered correctly by six clinicians in the world.

Two remarkable properties have been discovered for pilocarpine. The one best known is its power of inducing sweating. No sudorific compares with this alkaloid either in promptness and power or in efficacy as an eliminant. Give the patient hypodermatically a centigram of pilocarpine nitrate, and in from five to ten minutes a copious perspiration will start. Some persons declare the exudation is so free as to run through the bedding. This action is favored by rest in a warm bed.

In some cases the drug exerts its powers more particularly in causing a flow of saliva rather than stimulating the sweat-glands. This must be credited to individual peculiarities on the part of the patient. The stimulation of the other secretions is less powerful, but not less certain.

Few observations have been recorded as to the effects of pilocarpine upon any other secretion except the perspiration; however, this one seems to have some significance:

A stout, powerful Irish woman had never been able to nurse her children, the milk being scanty. She was given small daily doses of pilocarpine and soon had a sufficient supply of nurse for her babe. In a short time, however, she requested me to have her placed in confinement, as she felt an irresistible impulse to kill her husband with an ax. I stopped the pilocarpine. The flow of milk ceased, and with it the homicidal impulse subsided. This observation has found corroboration from a Siberian physician, who recorded a case essentially identical.

As a diaphoretic, pilocarpine has been utilized in many affections where sweating is considered indicated. To break up colds, following febrile attacks, infections, or following exposure. The earlier the remedy is employed, the better are the results. This writer has employed this alkaloid for twenty-five years as a specific in sthenic erysipelas, never failing to find the malady readily controlled by it.

Curiously, pilocarpine is not a remedy to be given in minimal doses until slight dewiness on the skin betokens its action. No effect is manifested until a full dose has been taken, and then it is not moisture but a real profuse sweat that comes. But the erysipelatous flush at once begins to recede from its edges toward the point first attacked; and if the pilocarpine effect is maintained the dermatitis is extinguished.

In asthenic erysipelas, with pale eruption, little or no fever and pronounced debility, no such benefits are secured from pilocarpine, but the depression deepens. Fortunately we have in the tincture of the chloride of iron a specific for this condition, little if any inferior. Pilocarpine has not received enough credit as an eliminant of toxins.

Bouchard discouraged the use of diaphoretics when he called attention to the fact that normal perspiration was only one-tenth as rich in toxins as normal urine; ergo, a pint of urine removes from the body as much poisonous matter as will ten pints of sweat. But the perspiration induced by pilocarpine contains five times more toxin than the normal excretion; so that a quart of pilocarpine-sweat is equivalent to a pint of urine —and the former is far more easily, quickly, and safely secured. The problem of diuretics is one of the most difficult and complicated in applied therapeutics.

In another group of maladies, pilocarpine is specific for a symptom, that of pruritus. No matter what may be the cause of the itching, a sweat-inducing dose of pilocarpine stops it. If the cause is a continuing one, the itching necessarily will return, as, for instance; in permanent occlusion of gall-ducts with reabsorption. For the itching accompanying jaundice after gallstone-colics, a single dose suffices.

This action of pilocarpine may be attributed to its elimination of the toxic matters in the skin that irritate the cutaneous terminations of the sensory nerves in a manner that induces itching instead of pain. The poison is swept out of the system by the sudoriparous glands.

In those terrible infections that almost surely destroy life, tetanus, rabies, etc., pilocarpine has been suggested repeatedly. I have been unable to find records of any exhaustive tests having been made of pilocarpine in these maladies. It has been "tried," a few doses administered tentatively, timorously, then quickly abandoned for something else. In these mortal maladies therapeutics must be practiced with an energy and persistence commensurate with the conditions presented. There was a never-to-be-forgotten lesson in the case of the negro having tetanus who by mistake received one ounce of quinine at a dose—and recovered.

The other feature of the action of pilocarpine has received so little attention that few know of it. This alkaloid tremendously increases leukocytosis. It may well be that to this as well as to its elimination of toxins is due some of its effect in acute infections. At the beginning of acute infectious attacks the numbers of the invading microbes are fewer than after they have had time to multiply in the overwhelmed organism. If the leukocytic garrison should be energized and tremendously reinforced by this action of pilocarpine, the battle may incline to the defenders before the attack has fairly developed.

But this is theorizing, although a most enticing line of observation and reasoning is here presented. The values of pilocarpine are too decided to be overlooked, too great to warrant its neglect.

W. F. Waugh.

Chicago, Ill.

PRESCRIPTIONS AND POISONS

In your reply (September, p. 758) to the editorial in *Hearst's American*, on "Prescriptions in Plain English," you show a lack of appreciation of the capacity of the writer. You say, "Let him define a poison—if he can."

There is no limit to what that man of *The American* can do editorially. How medicine should be practiced; infant feeding; changing the course of the solar system; errors of the divinity, and how to correct them, any other topic in the world, possible and impossible, all can be, yes, have been, decided by this "Highest-priced editor."

Find the problem—the solution is easy. Having written the answer, it is sent to all the Hearst newspapers, with full instructions as to paragraphing and what few lines need not be blackfaced. The only thing in doubt about the thing is, just how severe a jar the entire country will feel.

The fault of this editor is incurable, because congenital. He thinks that he writes ex cathedra at all times, when often his work is ex cathartica.

Also, he has some grouch of long standing against the medical profession. This is not the first attack launched against us; by no means.

As to how drug-fiends are being created, here is one way. I am treating a man for the opium-habit, who contracted it by taking Sun cholera mixture for diarrhea. Finding that it had become a necessity to him from continued use, he looked it up in his wife's "Doctor Book" and, learning that it contained opium, he changed to laudanum, then easily procurable. When he started treatment with me he was taking a little more than an ounce of laudanum daily.

Another instance. Twice this week I have read in newspapers the voicing of the protests of druggists against the prohibition of the sale of paregoric, which "the mothers say their babies need, and which does no harm." Yet, a druggist told me the other day of a woman he knew who took 32 ounces of paregoric a day regularly.

A Doctor.

MEDICAL-MISSIONARY EXPERIENCES IN AFRICA

An article by E. S. McKee, entitled "Medical Missionaries," in the September issue (page 835), reminded me of my four years' medical work in Africa and why I became a medical missionary.

While reading some missionary magazine, when I was in my teens, I was horror-stricken by the terrible way in which the witch-doctors treated the people, and I said to myself that all missionaries should be doctors. And that thought so filled my mind that I started out to study medicine, with the sole end in view of going into the foreign field as a missionary. And I ended up at Batanga, West Africa, in the Cameroons, where war now is on between the British and German colonial forces.

My first night in Batanga was one of those rainy ones, such as are seen in Africa; where the rain comes down as though someone had just lifted up the bottom of the sea and let the floods pour in upon you. And it was just such a night when I was called out by the good colored elder of the church to go to a woman in confinement, living two miles

away. Needless to say that I could not call a cab, or just crank up a Ford, or jump into my closed-in carriage, or step into a street car; I just had to foot it through the woods or part of the way on the sea-beach on the hard sand where the tide was out far enough for me to cross the points, and over the rivulets which were made by the small streams.

After reaching the town of Bongahilia, I found my patient in a hut, on a trundle-bed (the beds are made of poles 6 feet long laid lengthwise in a corner of the room), with a smoking fire at the head—observe, at the head, and not the feet of the patient, as we should have it—and the house inside and out thronged with people, because they knew that the new doctor was coming and they wanted to see and hear what would happen.

I soon learned that the child had been born some hours before, but the placenta had not been delivered; and this was the cause of much anxiety on the part of the people. I told them that I should have to give chloroform and operate on her— — — —! Well, these dashes mean more than tongue or pen can express. When I said "operate," my words were interpreted by those who could speak English. What a commotion! To tell the truth, I felt like a cat in a strange garret; for, I did not know how to get out, for fear I should be torn to pieces or that the relatives would carry the patient away from me by force.

However, had I known what was in the minds of the people, I might not have said "operate"; for, they still remembered a sad story of the doctor who was in my place the year before, and who did a major operation and the patient died. And, so, they did not intend to let this thing occur again. Still, a little tact and presence of mind soon settled the question. I called the chief, who was also among the onlookers, and told him that unless I did give chloroform and remove the placenta the woman might die. Thereupon he ordered the "congregation" dismissed, and I proceeded, by the use of a lantern held by one of the elders (even though it gave but little light through the smoke), to operate. Fortunately, I had chloroform, but I had no cone or towel. So, I placed cotton in a tin cup and, holding it with one hand, with the other I removed the placenta.

The woman did well until the second day, when phlegmasia alba dolens set in; which, however, under proper treatment, subsided nicely.

Of course, this woman became my sign-post in that part of the black continent and did not fall down—as the little boy said when he ran into a saloon and called out to the saloonkeeper, on seeing a drunken man fall into a gutter, "Say, mister, your sign has fallen down."

My "sign" stood up, and, needless to say, this was the beginning of my medical work in Africa.

As a matter of fact, all missionaries are supposed to spend the first year in Africa in the study of the language, but I soon became so overwhelmed by natives from all parts for miles and miles around that I had to take the language, so to speak, by osmosis, along with my medical work. The first-year's record shows between 5000 and 6000 treatments, and the last year's between 11,000 and 12,000 treatments; and by this I mean that at my dispensary and hospital I gave, with the assistance of my four native assistants, that many treatments. And, as Doctor McKee speaks of his friend in Egypt, so it is with the medical man in Africa: he is *it* with the natives if he has made a success of one or two cases at the first.

I never shall forget my first case of pernicious malarial fever, where the patient had been unconscious for some hours. A little lad 9 years old (and, by the way, living in the same town as my first obstetric patient) was taken with a chill and immediately became unconscious. After the natives had tried all kind of native treatment it was suggested to take him to the new white doctor. I had treated a number of cases of malaria in Baltimore before going to Africa, but had never seen one just like this and supposed it must be malaria in a pernicious form. It so happened that I had a solution of quinine hydrobromide. This I gave hypodermically, then watched the symptoms. After an hour I found the pupils of the eyes becoming active, and, whereas when first seen the patient was almost lifeless and did not respond to any stimulus whatever, he now showed signs of life. Following with the quinine gradually, I soon noticed he was coming back to earth, and in about five or six hours he was up and walking and never had a return of the fever nor any bad symptoms.

You can imagine my feeling, in the heart of Africa, over this case. So, I said to the family, "The boy was dead to you, hence, you had better give him to me." They answered, they had been thinking the very same thing, and there and then willed the lad to me for life. When leaving Africa, four years afterward, we had the little fellow's trunk packed, to come with us to America;

but they could not part with him and said, if we took him away the father would kill himself. We regretfully left him behind, for the boy had become, not only a faithful servant to us, but almost like a son.

If space permitted, I might relate many incidents; but I must tell one joke about my chief assistant, Ukumbwa. One day I had an attack of African malarial dysentery. (By the way, I had this until after I came home for two years or more, and finally overcame it with large doses of quinine.) I gave Ukumbwa charge of my patients in the dispensary, which was next to our bedroom, and told him to write the name of the patient and the kind of treatment, and also his own name, on each bottle, so that I would know when they returned. This he did, and he brought the first bottle to me for approval. I read it and saw "M. D." written after his own name. Asking him what that meant and how he got it, he answered: "That means that there is medicine in the bottle." So, poor Ukumbwa forever after was called by the other assistants "Medicine-in-the-Bottle."

Just one more joke about a native from the interior, who came down to the coast (our station being on the coast) for the first time in a caravan of about 100 carriers (as those natives are called who carry on their backs for hundreds of miles goods from one station to another), and who had for his full dress a leaf, to cover him in the front, and a celluloid collar around his neck; and when I paid him his 4 marks in German money ($1.00) for carrying 25 pounds for 60 miles, he went and bought an umbrella. When asked why he did not buy a cloth for himself he simply took the cloth from the umbrella and used the handle for a cane. Nearly all white gentlemen in Africa use a cane, and, as the African is a great imitator, this darky wished to be in style, and, so, by buying the umbrella he had a cloth to cover his loins and a cane like the white man, too. In this country we pay to have our hair cut, but in Africa I had to pay a native 6 marks to cut his hair, because I wanted his headdress to bring home as a curio.

These people love the white man and almost worship a medical man, and the missionaries never need carry firearms when traveling in Africa, for they are never molested. When there was war between the German government (I was in a German colony) and the natives of the interior, the missionaries could go back and forth through the war zone without fear, simply because they did not carry a gun; but just as soon as they saw a man with a gun over his shoulder, they began to protect themselves and watch him. Never once during my four years there did I take a gun, and I traveled by night and by day, through forests and jungles, and town after town, and never once felt afraid, not even of the animals at night.

I believe the world has yet to learn that the pen is mightier than the sword and that peace never will reign at the mouth of the cannon.

NEWMAN H. D. COX.

Arlington, Md.

HIGH-GRADE USES OF COMMON THINGS

Almost prohibitory war prices have caused bedrock scarcity to be reached here, in the medical realm as well as in current ways of daily life.

Luckily I had a large supply of chlorate of potassium tablets, and, under this stress, I began to use them in place of other remedies for throat and bronchial troubles. I ordered the patients to dissolve one slowly in the mouth at frequent intervals during the day, and to have them in reach at night, in case of inconvenience. The results, such as rarely attained from the better grades of creosote and guaiacol preparations and the still more "ethical" specifics, surprised me very much, although the chlorate had long been a favorite application of mine as a wash for blistered mouth and for internal dosage in typhoid fever.

I have now employed this drug for so long in so many kinds of treatment, without ever encountering complete negative effects, that I do not hesitate to tell the profession that it possesses a remedial property valuable even when the emergency such as now enthrals me does not exist. The solution that slowly forms and insensibly creeps down the throat favorably attacks catarrh of the stomach, while nasal catarrh is modified in an incredible degree.

Suppositories have been my standby in the treatment of obstinate constipation, especially where the rectum is occluded with hard dry fecal matter. But that application has ceased to be with me either a necessity or a luxury. I had long used enemas of glycerin and water in cases where the impediment was so serious that purges failed to act, as if the bowel were corked securely, and currents of water clysters could not be forced to enter with any satisfactory results.

This led me to experiment to find a substitute for the suppositories. I deposited a

mixture of glycerin and water, 1 or 2 drams of each, in the rectum with a small rubber syringe. The effect was magical, the action being more prompt and more voluminous than from the suppository, which latter often is evacuated ere sufficiently dissolved to be effective. With my enema, the patient has no time to loiter on the way if the closet is a little distant; in fact, it has been found advisable to use the application at the spot of the evacuation. There has not been a failure. And the desirable feature, more than the prompt relief, is, that after three or four daily treatments, one each day, three or four days often pass without the necessity of repetition. Digestion is materially improved. Two persons who used laxatives and suppositories, now, after a month of the new treatment, need no more laxatives, have no flatulency, eat and sleep well—certainly betterments not anticipated by me.

I find the mixture with water better than the pure glycerin. What puzzles me most is, the practically instantaneous purgative effect, almost as violent as croton oil by mouth, without, however, any after-inconvenience, except that frequently there are two active movements of the bowels, with usually more than an hour between.

Crude lettuce and onion salad has given me another surprise, a discovery that seems to promise more than could be expected from such a humble agent. Lettuce and onion salad is eaten with much relish by many people everywhere. I am the only person within many square leagues who has lettuce and onions growing luxuriantly, and of these many people eat almost every day. Among these there were some afflicted with the urgent necessity to urinate frequently in the day, and as often as eight to a dozen times in the night, but for which no medical advice had ever been sought. Yet, after eating a full plate of this salad every day for about a week the urinary functions returned to normal, one call in the night being the most of such experience, and the excessive quantity also no longer obtaining.

The virtue must be in the onion combination, the same persons having eaten lettuce alone and onions alone as frequently as they have eaten the mixture, but without noting any such effect. I have tried a few plates on a couple of venereal chronics, who were much annoyed by frequent calls to urinate; the frequency has been reduced some fifty percent, but it would be absurd to think of any physical alleviation. What part the vinegar and salt play in the salad combination I have no more idea than I have about the chemical action of the gastric juices upon the vegetable substances and how the extracts so actively operate upon the kidneys and urinary apparatus.

I have been desirous to prove this salad in enuresis, but have failed to find a case, never having had such a patient in all my time here. I have also tried to find others afflicted the same as those inadvertently benefited, but failed.

For many years I myself had been under the necessity of getting out of bed several times in the night, which I attributed to the large percentage of liquid, vegetable, and fruit food I eat, and the quantities of water I drink. I had eaten lettuce salad every day for months at a time, and onions, always cooked, at the same meals, without ever noting any change in my urinary complications. Hence, at first I was really skeptical about the results when I was asked if such food would thus act. However, I resolved to try it. The first and second nights I was much disturbed by some sick federal soldiers and other attentions demanded, and I really forgot to heed whether there were effects or not; but the third night nothing disturbed me, and then I was up only once. This I partly attributed to the two previous sleepless nights; however, the fourth and the fifth nights were the same, and then the sixth night I was not disturbed till day was dawning, and I noted that the quantity of urine was quite scant.

Making further investigation, I observed that the urine was highly colored, of yellowish hue deeply tinted with a greenish shade, and was too thick to be normal. I dropped the onion out of the salad, and found the urine normal but reduced in quantity three days later. It has now been about two weeks, without any disturbance at night till near the morning. There have been no untoward symptoms.

I have not seen the other benefited parties in ten or more days, although they promised to advise me immediately at the first symptom of relapse; hence, I take it for granted that they are still in normal health.

My own experience seems to me to indicate that the flow of urine could be dried up by the long-persisted use of the dish. I admit that I eat of it rather copiously, maybe excessively, as I really wanted the relief found, though I never suffered the slightest detriment more than the inconvenience of being awakened six or seven times every night, which was not always agreeable.

It may be that this intense climate and rapid growth create qualities in vegetables not possessed by those where eternal summer-time is broken; yet, those grown here are mild and delicious. But, also, the disorder here may be more yielding than it is among people who live more luxuriously than do we.

My concrete-reservoir project for holding and guarding rain-water from the galvanized-iron roof is proving extremely successful, and people who drink no other water have no fevers, while before they passed more than half their time thus afflicted. I have found that my roof of 3500 square feet yields 15 gallons from a night of ordinary dew. Hence, the dry coast of California, where there is heavy misty fog, often till noon, should give enough to be in a high degree useful on lots of five or ten acres, as the daily supply would rarely fail. Such cisterns would cost little where cement and sand are cheap, about one-fourth what they cost here. My cistern is covered with concrete and the water enters through a strainer that the smallest insect cannot pass, and the overflow is tapped with the same fine wire-cloth; so the water is practically in a closed "demijohn," where it would never deteriorate were fresh supplies not almost constantly filling it up; yet, the drought rarely reaches three months here.

ROBERT GRAY.

Pichucalco, Chiapas, Mexico.

[Readers of CLINICAL MEDICINE will be gratified to learn that Doctor Gray has gone safely through the Mexican rebellion, and that he is now in good health. We have recently received several articles from the doctor, which will be published in early issues. His life has been a thrilling one, filled with unusual and adventurous experiences, and we hope (yes, we believe) that he may be prevailed upon to tell the story. We are urging him to do this.—ED.]

UNDERNUTRITION

Undernutrition is a condition brought about by the fact that the body, from some cause or other, fails to receive the amount of food necessary to maintain body equilibrium. It is a very common condition, and is found in people leading normal, apparently healthy lives; in excessively thin and weak individuals; in subjects of scrofulous diathesis; in convalescents from acute diseases; in victims of wasting and nervous diseases—the degree and nature of the undernutrition differing in each condition.

Thus, the degree of undernutrition may be extreme, mild or negligible—it may be almost physiological in its manifestations or border on the pathological; or, again, may be so severe as to predispose to or actually cause a pathological condition. The amount of food received by the body as compared with the amount needed may, therefore, be greatly deficient or only slightly so. Van Noorden has grouped the disproportion into four classes, namely:

1. Mild degree of undernutrition: When there is a difference, between the calories of the food and the calculated maintenance diet, of 20 percent.
2. Medium degree: When the deficit is between 20 and 40 percent.
3. High degree: When the deficit is between 40 and 60 percent.
4. Severe degree: Above 60 percent.

The high and severe degrees of undernutrition, as per above table, may be called states of inanition, and occur only under the stress of marked pathologic conditions.

There may be different causes as to why the body does not receive sufficient food to maintain its equilibrium; and it may be well to divide these roughly into five divisions; namely:

a) Inflammations and injuries to the upper digestive tract, causing impairment of digestion and absorption.

b) Chronic fevers and disorders of metabolism.

c) Psychic disorders and nervous diseases.

d) Unreasonable prejudices or fear of consequences of taking food.

e) Sensation of distaste for food, lack of appetite, rundown system, and so on.

The treatment in the above cases is, to remove or remedy the underlying cause so far as is possible, and to resort to a fattening diet. Any excess of food which is supplied to the body beyond the amount required to furnish the current outgoings of energy, in the form of heat and work, will be stored up, in the form of fat; and the sum total of food per day supplying any excess is called a fattening diet.

It will thus be seen that the first essential in treatment is, to calculate the maintenance diet, or the amount of food sufficient to maintain equilbrium for the particular individual in hand. For example, calculating for a man of 154 pounds who is resting in bed, this would be 2100 calories. The maintenance diet varies, however, with the weight, activity, and metabolic energy of different individuals.

Having ascertained, approximately, what the maintenance diet of an individual is, we must calculate a diet supplying a number of calories over and above that required to maintain equilibrium. These remain within the body as reserve-energy and are stored up in the form of fat.

As an example of a fattening diet that may be gotten up for an average business man whose maintenance diet is 3050 calories a day, we may present the following:

Rice, macaroni or oatmeal, 1 1-2 ounces, or, green peas, 2 ounces, or, bean-soup, 3 1-2 ounces, or, spinach, 3 ounces	173 calories
Meat (broiled), 12 ounces, or, veal cutlets, 11 ounces	800 calories
Bread, 10 ounces, or, zwieback, 8 ounces	725 calories
Potatoes (bread), with butter, 10 ounces	337 calories
Milk, 16 ounces, or, cream, 6 ounces, or, cakes, 4 ounces	357 calories
Two eggs, 4 ounces, or, omelet, 5 ounces	167 calories
Butter, 2 ounces	463 calories
Sugar, 2 ounces	231 calories
	3353 calories

Add to the above surplus of 300 calories extra per day, an ounce of codliver-oil, with its 282 calories, and we have more than 500 calories available to be stored up in the form of fat; or, in other words, we have a deposit of approximately 2 or 3 ounces of fat in the human body per day. Of course, the above may be modified more or less.

In addition to the fattening diet mentioned above, plenty of water should be ingested. This stimulates metabolism, by dissolving out and removing waste products. It also fills out the skin, making it plumpy, thus giving the patient enough courage in the seeming "fat" to continue with the treatment the first few days, when dieting seems so difficult.

It must be noted, however, that muscular and glandular tissue cannot be built up by overfeeding alone. Regular, systemic exercise must be furnished, the muscles becoming larger and stronger, and in consequence the body becoming rounder and "fatter" through the stimulus of use. This exercise must be deemed essential along with the diet, and should be insisted upon.

Practically all articles of food can be utilized as fat-building foods, provided that their calories can be utilized. Fat, itself, is among all articles of food the most valuable in fattening cures, as it represents a very high calorific value in small volume and can be stored up with the least expenditure of energy and labor to the organism, often being stored up without change.

Although a fattening diet is the *sine qua non* in undernutrition, and although overfeeding is practically the only efficient treatment, the use of drugs to aid in the treatment should not be slighted or ignored. They are of great practical value in all fattening cures, in that they not only are used to stimulate the appetite and aid in the digestion of the extra amount of food, but are also used for their action as general tonics, foods, and reconstructants.

Codliver-oil. This is nothing but a very easily digested and nutritious fat food, yielding 283 calories per ounce.

Extract of malt. This represents a large percent of carbohydrate nutritive matter and a small amount of diastase.

Nuclein. This is a highly nutritious proteid food and also a stimulant to constructive metabolism, and ought always to be used in cases of undernutrition. The nucleinated phosphates, together with strychnine arsenate, have been found an ideal combination, given in alternation.

Sanguiferrin. This has been useful in those conditions of undernutrition where there is a tendency to anemia, and is superior to many of the iron preparations on the market.

Capsicum and nux vomica compound. This should be used only in those cases in which there is marked anorexia.

D. E. Piconi.

Brooklyn, N. Y.

LICE: THE PLAGUE OF THE ARMIES IN THE FIELD. DO THEY CONVEY INFECTIONS?

In my book, "Napoleon's Campaign in Russia, Anno 1812," I quote Carpon, a surgeon-major of the grand army, who, telling of the days of Wilna—almost as frightful as the disaster of the Beresina—speaks of the lice plague. It is revolting. I also mention Suckow, a Wurttembergian first lieutenant, who describes the intolerable distress caused by lice, disturbing the sleep of the camp-fire; further, Johann von Borcke, who became alarmed when he discovered that his whole body was eaten up by the vermin; and, again, a French colonel, who relates that in scratching himself he tore a piece of flesh from the neck, but that the pain caused by this wound produced a sensation of relief. Under the circumstances, characteristic of that Russian campaign—especially the impossibility of

bodily cleanliness—the vermin developed in a way that baffles description.

No one is exempted, according to Constant, Napoleon's valet, even the emperor had his share. When the few survivors of the Russian expedition—these hollow-eyed spectres, with their frozen hands and feet, full of dirt, blackened by the smoke of the camp-fires, wrapped in sheepskins and rags, and with long beards—came to German quarters, good people gave their guests an opportunity to clean themselves thoroughly; the well-to-do having their servants to attend to this process. In the houses of the working-class, man and wife would give a helping hand. A sergeant, together with a comrade, was quartered in the house of an honest tailor, who, seeing how the soldiers were covered with lice, made them undress, and then ironed the outer clothing with a hot iron, while his wife boiled the undergarments.

Strange to say, this subject of lousiness hardly ever is mentioned in the medical histories of wars, although everyone who has been in the field is familiar with it. Some of my readers complained that I had not told more on phtheiriasis; however, I had given all that I had found in the old papers telling of the Russian campaign, and I did not come across the description of a remedy until I consulted the Surgeon-General's library catalog. And all I found was a paper entitled "Weyland: Ueber die Sichere Vertilgung der Kleiderlaeuse, der Pflege der Armeen im Felde und im Bivouak," published in a medico-military journal of Vienna, in 1872.

Weyland reports his experience with a remedy he had successfully employed in the Franco-German war of 1870-71. The conservator of a natural museum had told him how much his specimens had been damaged in comparatively short time by lice and moths, notwithstanding that arsenic had been employed, and how much better they were preserved since benzin had been used.

Weyland adopted this remedy for the military hospital of which he had charge. He had wooden boxes made, 5 feet square, lined and covered so that they could be closed hermetically. Benzin was poured in the bottom of the box, and the clothes, when being packed into it, had benzin poured on between the successive layers. The box, having been packed to its capacity, was closed tight and kept thus for two or three days. When the clothes were taken out one saw with surprise and disgust how the sloughs of the dead lice fell out in immense numbers. The evaporating benzin, penetrating the garments, had killed them, as it will kill all kinds of insects. As we know benzin does not injure the fabrics.

We are accustomed to read a great deal about flies and bedbugs as carriers of infectious germs, but lice are seldom mentioned.

In Athens we meet countrymen wearing the picturesque Greek-Albanian costume, the "phoustanella." The pride of these "phoustanellaphoroi," as they are called, is, to have the garment snow-white. Occasionally we notice one with a brown phoustanella, that is, a man who comes from a great distance and is on a prolonged journey. Having no opportunity to have his garments washed, he dips them in tar-water, not only to hide the staining of everyday wear, but also as a protection against vermin.

A. Rose.

New York, N. Y.

THE OLD DOCTOR

WITH APOLOGIES TO UNCLE NED

There was an old doctor,
But they only called him "Doc,"
He was always on the go, on the go.
He had a lot of sense
In his old shiny block,
For it held exactly all there is to know.

Chorus:

He could easy tell a fiddle from the bow,
He could rustle, rustle, rustle for the dough.
There wasn't any rest for the poor old doc,
He was always on the go, on the go.

This wise old doctor
Went to make a morning call,
But he stayed, and he stayed till tea.
You think a pair of twins,
But you haven't got 'em all,
For they counted up to one, two, three.

(Chorus:)

When the poor old doctor
Had a hurry call to die,
He was pulling on his boots, then, to go
He opened out his wings,
He was ready for the fly,
He was always on the go, on the go.

(Chorus:)

C. N. Miller.

Oakland, Cal.

THE ALIENISTS AND NEUROLOGISTS

For several years past, the Chicago Medical Society has entertained, annually, the leading alienists and neurologists of the United States, usually sometime during the summer. On this occasion, many topics of pertinent interest are discussed. This year the meeting was held July 13 to 16, at the Hotel LaSalle.

In order to preserve in a permanent form the numerous splendid papers presented at this meeting, it was decided to publish them together in a single special number of *The Illinois Medical Journal.*

This number has just appeared, and, with its 265 pages printed in two columns, it certainly is one of the finest as well as one of the largest medical journals we have ever seen. Virtually the entire issue is given up to the papers presented at the July meeting. The articles contributed are written by such men as L. Harrison Mettler, Dr. James A. Clark (president of the Chicago Medical Society), Judge Harry Olson (of the municipal court of Chicago), King, of Atlanta, Lindsay, of Topeka, Solomon, of Chicago, Ricksher, of Kankakee, Throckmorton, of Des Moines, Bowers, of Michigan City, Searcy, of Tuscaloosa, Munro, of Omaha, Sterne, of Indianapolis, Diller, of Pittsburg; but there are many more. The number as a whole makes a most complete volume upon psychiatry, and as such is worthy of a place in every physician's library. The price of this number alone is $2.00.

In addition to the reading of the papers, the alienists and neurologists passed some very important resolutions. We have not the space here to reproduce them all, but the following, submitted by the Committee on Alcoholism as a Causative Factor of Insanity, certainly are of peculiar interest:

Whereas, in the opinion of the meeting of alienists and neurologists of the United States in convention assembled, it has been definitely established that alcohol when taken into the system acts as a definite poison to the brain and other tissues; and

Whereas the effects of this poison are directly or indirectly responsible for a large proportion of the insane, epileptics, feebleminded, and other forms of mental, moral, and physical degeneracy; and

Whereas the laws of many states make alcohol freely available for drinking purposes, and therefore cater to the physical, mental, and moral degradation of the people; and

Whereas many hospitals for the insane and other public institutions are now compelled to admit and care for a multitude of inebriates; and

Whereas many states have already established separate colonies for the treatment and reeducation of such inebriates, with great benefit to the individuals and to the commonwealths;

Therefore, be it resolved, that we unqualifiedly condemn the use of alcoholic beverages, and recommend that the various state legislatures take steps to eliminate such use; and be it further

Resolved, that we recommend the general establishment, by all states and territories, of special colonies or hospitals for the care of inebriates; and be it

Resolved, that organized medicine should initiate and carry on a systematic persistent propaganda for the education of the public regarding the deleterious effects of alcohol; and be it further

Resolved, that the medical profession should take the lead in securing adequate legislation to the ends herein specified.

These resolutions were passed unanimously. It is an evidence of the changing signs of the times that any medical society can be found which will commit itself unqualifiedly and without reservation to the condemnation of alcohol in any form, with a demand for the suppression or the control of the traffic therein.

Other resolutions were passed relative to the influence of venereal diseases, of habit-producing drugs, of unsanitary hygienic surroundings, heredity, and immigration, upon the accumulation of the mentally unfit in this country.

All things considered, the meeting was a most interesting one, and we hope that it will become a permanent feature of Chicago medical life. If any reader of CLINICAL MEDICINE desires to procure a copy of the October number of *The Illinois Medical Journal*, containing, as said, the complete proceedings of this great meeting, he may obtain the same by addressing Dr. Clyde D. Pence, 3338 Ogden Avenue, Chicago.

PRACTICAL POINTS ON DIABETES, ESPECIALLY PANCREATIC DIABETES

Very little work has been done on pancreatic diabetes. Research-work does not amount to anything: "Time is too short to specialize in that kind of investigation" is what men say. More attention is being given to certain other troubles, such as cancer, hydrophobia, tuberculosis. (These, by the way, I believe never will be cured, not even if a hundred other Rockefeller Institutes are founded on our hemisphere. Prevention, that is all that can be done, now and for a long, long time to come.) But, men ought to make a special study of socalled "common democratic" ideas and work, and leave the aristocratic hypotheses (they are nothing else!) to stand as hypotheses.

Dextrose, or glucose, lost through the urine is the distinguishing symptom in diabetes, although it also occurs as a transient symptom in some nervous diseases, or even after large consumption of sugar and carbohydrates in the diet; and then it is called transitory glycosuria. We meet such cases every day and if the pathologist is not careful enough the report will convince the practitioner that his patient is in a dangerous condition.

About three or four months ago an Italian woman called at my laboratory to have a

urine examination made. The specific gravity was found to be 1048, and sugar about 6 percent. Three days later the specific gravity was 1021, while of sugar there was found only a trace.

The 4-year-old child of a colleague was eating candies during two or three weeks. Her urine tested 3 percent of sugar, and had a specific gravity of 1038. About two or three days later everything was in normal condition. A little bromide effected the wonderful cure.

Normally, the liver arrests sugar coming from the alimentary canal; if imperfect functioning allows some of it to pass, we have an alimentary glycosuria or perhaps more persistent forms. In a case of echinococcus infection, 12 percent of sugar was found, but it disappeared in a few days after the echinococcus-cyst was taken out by operation. Extirpation of the pancreas causes diabetes, for the regulative function of the gland is thereby removed and more sugar reaches and passes the liver. In the blood, sugar is a protoplasmic poison, causing increased katabolism and nitrogenous elimination.

Atrophy and also cachectic degeneration of the pancreas is found after death from diabetes; while experimental removal of the gland in dogs causes glycosuria, which generally proves rapidly fatal.

It is supposed that the islands of Langerhans, which in the human organ lie almost exclusively in the tail of the gland, have a peculiar function in regulating the metabolism of sugar, and that, when degenerative changes in the pancreas are accompanied by glycosuria, it is because that section is involved where these cell accumulations are found. Extensive lesions may involve the head of the pancreas without causing glycosuria, owing to this anatomical arrangement. When the islands are involved, the lesion may be a hyaline change in the epithelial elements or a partial or complete atrophy of the entire islands. A well-established fact is that diabetes often is accompanied by lesions in and about the fourth ventricle.

The pancreatic lesions are not always of one kind, even in the pancreatic form of diabetes, but certain forms have been found both in obese and in cachectic patients.

In cases of pancreatic diabetes, I observed excellent results from every kind of treatment, including climate, diet, electricity, exercise, and so forth; and also with the bromides.

If the diabetes is of other origin, the treatment must depend always on the special cause of the presence of the sugar.

Every case ends fatally, invariably, if it is not treated according to its etiology. During one year I saw nearly 100 cases of diabetes, 90 percent of which ended fatally, because the practitioners' "good idea" always was a step—too short. Unfortunately, in many laboratories much poor superficial work is being done, and these circumstances explain the numerous deaths from this cause.

S. R. Klein.

New York, N. Y.

CROTON-OIL AS A CURE FOR SCIATICA

I note in July Clinical Medicine what Doctor Dercum is reported to have said, in *The Therapeutic Gazette* for April, about the treatment of sciatica by rest in bed, placing the limb in splints, and the administration of sodium salicylate and sodium bromide.

In my own experience in the treatment of sciatica, I have found no remedy so efficacious and prompt as 1-drop doses of croton-oil made into pills with conserve of roses or bread crumb (and combined with or without opium, as may be found necessary to control too active an effect on the bowels), one pill to be administered daily or every other day for ten days or a fortnight. At the end of this time very great, if not complete, relief will be afforded.

Geo. D. Stanton.

Stonington, Conn.

[Pretty energetic treatment, at which, I fear, the average patient will rebel. Simpler and pleasanter are elimination with the daily morning dose of saline, immobilization of the limb, hot epsom-salt compresses, alkalinization with calcium or sodium mixtures (as in calcalith or sodoxylin), and full doses of the salicylates. But we have no doubt the croton-oil would help.—Ed.]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

IN A PREVIOUS article I referred to chlorosis. I wish to add a few words to what there was said. If a girl is chlorotic, by all means she should be cured before contracting marriage, because then it is easier to cure than afterward; while, moreover, should pregnancy occur, miscarriages frequently take place and also her offspring generally are scrofulous or delicate.

With regard to hysteria, it is more difficult to know just what course to advise. If the trouble is highly developed, that fact should be made known to the intended husband; for, Boucher has ascertained that out of 170 epileptics 23 had extremely hysterical mothers.

Still, every rule presupposes exceptions; and, inasmuch as nervous disorders become more difficult to cure in proportion to the length of time they have been permitted to last, it is a question whether it be not wise to permit many among the hysterical girls under age to marry. Only the medical adviser can answer so grave a question.

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Some of the disorders here to be enumerated are common to both sexes in the period between the ages of forty-two and forty-nine years.

Gout.—Gout and its allied complaint, rheumatic gout, seem to be produced by ungenial climates and the conditions of a high civilization. Those generally suffer from gout who eat more than they can digest and drink anything that does not reduce them to a state of intoxication.

Women, as is well known, are not, in general, liable to gout until after cessation of menstruation. But this rule is not without exception; I have seen patients tormented with it all their lives, although they were as regular as possible. The cause of this general immunity of women from this disorder may be traced to their more habitually temperate habits and to the more constant action of the skin, as shown by the tendency to perspiration during the monthly periods, during pregnancy, and during lactation.

Cancer.—This terrible infliction, which may attack various parts of the body, figures during the present epoch to a considerable extent in the tables of mortality. The effects of the disease, the causes of which are utterly unknown, are frightfully fatal. That it does not depend upon habitual intemperance, is clear from the fact that throughout life women are more liable to cancer than are men and it is at the period of the climacteric that they become most subject to it.

All we know of its cause is, that in women, particularly in those of a very nervous temperament and under the influence of grief, the blood becomes poisoned and cancerous products are deposited in some one part of the body, whence the contagion is gradually disseminated through the whole system. The most rational line of conduct is, to let our lives be governed by approved rules of health, so as to obviate a preponderance of the nervous system.

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It is not unusal for women to refer all their extraordinary sensations to "the change of life" and to consider that when they have thus accounted for their diseases they have at the same time cured them; and in this most medical men—judging at least from their practice—seem to be of the same opinion. Too little regard is paid to the dangers of the crisis; and when the threatening consequences of mismanagement have become startling those fatal mutations are attributed to some trivial cause, and the victim passes away to the sound of the passing bell; and no increase of knowledge, acquired by such a mournful experience, stands in the way of the next victim to a management as unwise and as thoughtless.

The complaints that women at the climacteric often make frequently are hushed by doctors with the unsatisfactory reply that such complaints are owing to the change of life and are likely to cease whenever the change shall become complete. A physician has no moral right to put to sleep the anxieties of his patient, and to save himself the trouble of thinking by so concise and unphilosophical a mode of proceeding. Whenever, therefore, a woman at this period—which is universally

admitted to be a critical and dangerous time for her—comes to complain of symptoms referable to some morbid condition of the reproductive tissues, it is clearly our duty to give considerate attention to her condition, and not to dismiss her until our judgment shall be fully satisfied as to the therapeutical or hygienical indications of the case.

To derive benefit from the best advice, it is necessary to believe in the evils it is intended to avert. Women, therefore, should be impressed with the conviction of the dangers that await them; while at the same time they should be convinced that their troubles depend upon causes almost entirely under their own control. Unfortunately it too often happens that women are not made aware of the necessity of precautions until the function has entirely ceased; whereas, these should be taken just as soon as nature shows its intention to effect a change, by repeated irregularities in the amount or quality of the accustomed discharge, as well as in the time of its appearance and the pain by which it is attended.

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In some women, after the menopause, the stock of vital productivity is fairly exhausted and no active treatment is required. But, in most there is a superabundant nervous energy or a superabundance of blood; for, that supply which formerly was sufficient for the maintenance both of mother and offspring can thenceforth be expended only on the woman's frame, in which the circulating system tends to assimilate to that of man.

There is one important point to be remembered by women, namely, that, in proportion as their sufferings were protracted previous to the healthy establishment of the periodical flow, so may they, in general, expect its cessation to be attended by a corresponding period and intensity of suffering. This is a useful warning to many women; but it must not also be inferred that those who have suffered little or nothing at its establishment have no illness to expect and therefore need take no precautions.

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Another fact equally interesting and important to be known is that in general those diseases which precede the first appearance of the courses may likewise be expected to precede their cessation. It has been noticed that hysteria and epilepsy have appeared before these two important epochs in the lifetime of woman, the patient's life having been free from these diseases during the intervening period. In my own practice, I have several times seen them preceded by an abundant eruption of boils, frequently by continued diarrhea, and still oftener by a great amount of pseudo narcotism and of hysteria in cases where there was little or none during the persistence of the monthly function, child-bearing or lactation.

Another indication useful to women is, that whenever irregularities in the monthly appearance coincide with sensations of sinking at the pit of the stomach, with flushes of heat and perspirations, even though their age may only be between thirty and forty, they may, in general, consider these occurrences as warnings of cessation, particularly if they are accompanied by a corresponding amount of pseudo narcotism.

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Lastly, there are diseases which occur at this critical time which escape all calculation, and can be explained only by the well-known fact, that the impetus of morbid action tells most forcibly on the weakest organ; for, it would be erroneous to consider as disease of the critical time that which, if looked for, would have been discovered long before. However, those diseases which, although previously developed, proceed with increased activity after that time may fairly be considered as the result of an alteration in the constitution and brought about by the change of life.

One observation applies to the treatment of all the diseases of this epoch—the necessity of time. Nature cannot work at a railway pace. A habit of thirty years cannot be interrupted without periods of hesitation, of trial, and infirmity, previous to the recovery of health. This patient expectation of health, without recourse being made to vigorous measures, often is irksome to women, for the notion of immediate relief clings with pertinacity to all sufferers.

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Ordinary Symptoms of Menstrual Cessation.—Convinced that a minute investigation into the natural history of the phenomena of cessation could alone give us an insight into the diseases of that epoch, I have carefully noted the morbid phenomena which occurred at cessation in several hundred women, and some of the most frequent symptoms may be referred to the cerebral system.

Headache, sick-headache, hysteria, and pseudo narcotism had existed at menstruation in.....	64	percent
They were augmented in.....	36	"
They remained the same in.....	18	"
They were less in.....	10	"
They did not exist in.....	36	"

Thus, when the habitual derivation from the sanguineous mass was no longer regularly performed every month, the cerebral symptoms were increased in 36 percent. During the period preceding cessation, sick-headache is but seldom observed.

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With regard to hysteria, it will still be observed in women of a sanguine temperament, in whom the least disturbance of the periodical function has, throughout life, often brought on this disorder. Whereas, on the contrary, in women of a nervous temperament, hysteria will diminish in proportion as the activity of the reproductive organs becomes less and less, and will cease entirely with the subsidence of their action. Pseudo-narcotism is the most common symptom of cessation.

Those who have carefully analyzed the symptoms presented by some women at the change of life will remember the habitual giddiness, the uncertain step and tottering gait, the vacancy of feature, and the drowsy or drunken expression of the eye, as well as the efforts they made to recover their oppressed intellects when aroused by a question; and exact observers will not deem exaggerated the appellation pseudo-narcotism. Such patients say that they feel as if they had taken too much, as if something had got into their head.

Such examples of pseudo-narcotism fortunately are rare, for they present the extreme of what may be observed quite often. The ordinary symptoms are: a strong tendency to sleep, an uneasy sensation of weight in the head, a feeling as if a cloud or a cobweb needed to be brushed from the brain, disinclination for any exertion, impaired memory, and a dimunition in the powers of the mind.

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I have sometimes been told by women at this period of life, with an expression of anguish which could not be feigned, that at the monthly epochs they felt so strange in the head—so lost—such sensations of impending horror that they were sure they must some day go mad. May not this be considered to be the last step of the ladder that may lead a woman from the first slight haziness of intellect to its total absorption?

I shall draw the attention of those who may charge me with exaggeration to a sketch of a similar case drawn by the masterly hand of Sir H. Halford. "The subject of such an indisposition," he says, when alluding to the change of life, "has probably grown corpulent. She sits in an indolent posture, looks gloomy, hardly speaks at all, and we learn from her attendants that she lives under the impression that some fancied evil is about to befall her. She is suspicious, undecided in all her movements, and manifests symptoms which differ in degree only from melancholy mania."

There are many insane women between the ages of forty and fifty whose recoveries may be expected when the womb shall have fairly resumed its pristine inaction, and when also the brain shall have lost a fertile source of irritation and disease. Unfortunately, it happens that the poorer classes are much too unmindful of the health of women at the critical periods of life and pay too little attention to the means whereby the uterus may be assisted in its efforts to preserve its due influence upon the human economy; and, therefore, is it, in a very great measure, that insanity is so frequent an occurrence among women.

Among other disorders of menstrual cessation are: sinking at the pit of the stomach; inflammatory affections of the womb; flooding; uterine fibrinous tumors; ovarian tumors; biliousness; diarrhea; hemorrhoids; intestinal loss of blood.

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In sudden congestions from exposure to cold and wet, with consequent chills, headache, stoppage of menstruation, and so on, the prompt use of aconitine generally will restore the circulatory equilibrium, averting a serious illness.

The severity of herpes zoster can be greatly allayed and the duration of the malady decidedly shortened by the administration of 1-6 grain of zinc phosphide one hour before each meal.

In some bilious attacks, 1-1000 grain of copper arsenite in hot solution, if taken at fifteen to thirty minute intervals, will prove almost a specific. The indications are: dizziness, flatulence, and alternating constipation and diarrhea.

One full dose of copper arsenite, 1-100 grain, followed at fifteen-minute intervals by small doses, 1-1000 grain, will usually stop nausea promptly, except perhaps when caused by cirrhosis of the liver.

Persons, especially women, of a gouty diathesis who suffer from bronchitis characterized by violent coughing, with nonpurulent expectoration; attacks of dyspepsia, diarrhea or dysentery; or violent neuralgic pains about the head and face, will be greatly relieved by colchicine, iodized calcium, and saline laxative.

Among the Books

HAMILTON-MUNCIE: "FOUR EPOCHS OF LIFE"

Four Epochs of Life. By Elizabeth Hamilton-Muncie, Ph. M., M. D. Illustrated. New York: The Gospel Publishing House. Price $1.50.

The author of this little book has applied to her educational propaganda the powerful principle of indirection, and put her preachment into the form of a story. She evidently has perceived the uselessness of battering Gibraltar from the sea by a frontal attack, and realizes that the only method offering any chance of taking the position lies in a flank-movement. There are, of course, many features of the book that well might be criticized. We think, for instance, that in spots it is a little too much inclined to be "preachy." But its minor faults all sink into insignificance beside the central fact that it grasps and applies the principle of indirection in sex education.

For one person who will read a cut and dried lecture upon the subject, there are hundreds who will read and profit by this human, homely little story, which brings the truth it seeks to instil into vital and intimate relation with the experiences of daily life. We congratulate Doctor Hamilton-Muncie upon her intuition, or her knowledge of human nature—or whatever faculty it may be that has made her a pioneer in this style of writing; and we earnestly commend her book to the attention of those physicians who are seeking for some adequate, yet delicate, way of reaching the young among their clientele.

GOEPP: "STATE-BOARD QUESTIONS"

State-Board Questions and Answers. By R. Max Goepp, M. D., professor of clinical medicine, Philadelphia Polyclinic. Third, revised edition. Philadelphia and London: The W. B. Saunders Company. 1914. Price $4.00.

Of the real value of books of this character we have never been quite able to satisfy ourselves; but, then, that aspect of the matter is, perhaps, a little outside the province of a reviewer. Apparently someone does see good in them, for we know that there are hundreds, even thousands, of students throughout the country who use them, as this, the third, edition of Goepp's compilation certainly demonstrates. To such, this compilation must be a real mine of wealth; for it is a representative and comprehensive gathering together of state-board questions and answers, excellently and helpfully presented.

Aside from those who may desire to avail themselves of the help here afforded in preparing for a state-board examination (which presumably is the prime purpose of the book), it will be found of some service to any student or practitioner who feels the need of "brushing up" on any of the numerous branches of medical knowledge treated of, and in which everyone is more or less prone to become stale and out of practice. So far as we can judge, the information it contains is accurate and reliable, although, of course, we do not pretend to have made a thorough scrutiny.

ASHURST: "SURGERY"

Surgery: Its Principles and Practice. For Students and Practitioners. By Astley Paston Cooper Ashurst, A. B., M. D. With 7 colored plates and 1032 illustrations. Philadelphia and New York: Lea & Febiger. 1914.

The time has long gone by (if it ever did exist) when a textbook upon one of the branches of medicine could cover anything like the entire field of related theory and practice. It may, indeed, be seriously questioned whether that be the ideal function of a textbook. Rather, we think, is it the office of a textbook to give a comprehensive summary of its subject; as the author of this particular work aptly puts it—to teach the student to know rather than to do. Judged from this standpoint, there are all too few legitimate textbooks of surgery in the literary market, and both teacher and student feel the lack keenly. This work of Ashurst's, therefore, will find a hearty welcome awaiting it among the ranks of those who teach and those who study surgery.

In our opinion, the book is a capital one to teach and study by. It is written precisely

in the style and form of the oldtime textbooks of surgery—after the fashion of Walsham's famous manual, for instance. It is immensely interesting, by the way, to compare the subject-matter, step by step, with that of the older works, and see how times have changed, and manners have changed with them. We are, in fact, shown new friends with old faces. All the facts of modern surgical science are set before us in the compact, logical style of the older writers, which cannot be surpassed. Doctor Ashurst's work ought to become a favorite with the schools. We predict that it will.

CORRECTION

In the September number of CLINICAL MEDICINE we reviewed an interesting book entitled "Practical Hormone Therapy," by H. R. Harrower, M. D. This book is published in England by Messrs. Balliere Tindall & Cox and through an unfortunate oversight credit for its publication in America was given to Mr. Paul Hoeber of New York. This is an error. We understand that the book is handled by the author himself, whose address is 880 W. 180th Street, New York.

In a recent communication Doctor Harrower informs us that he will be perfectly willing to send a copy of this book on approval to any reader of CLINICAL MEDICINE who requests it. We would suggest that this is a fair offer and that those who see the book will soon be convinced of its practical value.

CANDLER: "DISEASES OF CHILDREN"

Everyday Diseases of Children, and Their Rational Treatment. By George H. Candler, M. D. Second edition, revised and enlarged. Chicago: The Abbott Press. 1914. Price $1.00.

Amid the dreary monotony of iteration and reiteration in medical literature—textbooks copying one another, ad nauseam—it is decidedly refreshing to come upon a work like this, which copies nothing and echos nobody, whose suggestions and means of treatment are not drawn from stereotyped literature, but reflect personal experience based upon an application of the principles evolved by the same author in his own extensive practice.

And this is the best reason a book can have for its being; and, if the first edition of this book by Candler justified itself on this score, the second edition achieves even still greater justification. There is nothing cut-and-dried about this handy manual. It fairly bristles with individuality and practical resourcefulness. It is alive with the busy atmosphere of the sick-room where "something is doing."

The book is based, of course, so far as treatment is concerned, upon active-principle therapy. If the author believes (as unquestionably he does) in active-principle medication, and if his experience verifies and justifies his faith in it, then it is to his credit and to the uplifting of medicine that he makes that the cornerstone of his therapeutic doctrine. While undoubtedly men who have the courage of their convictions to the extent of applying them make mistakes, still, these are the mistakes of men who do things, and are always more than offset by the really valuable contributions they make to real, burning, living knowledge.

However this may be, Doctor Candler's book contains excellent and vital information and counsel upon the subject of which it treats, namely, the rational treatment of everyday diseases of children; and everyone of its pages breathes the spirit of therapeutic optimism. It is not a book for the therapeutic skeptic or nihilist; but for the physician who believes that his function is to really cure and relieve disease, and who earnestly seeks ways and means to do so, it will be found a veritable mine of suggestion and help.

HARTENBERG: "NEURASTHENIA"

Treatment of Neurasthenia. By Paul Hartenberg. Translated by Ernest Playfair, M. B., M. R. C. P. Edinburg, Glasgow, and London: Henry Frowde, and Hodder & Stoughton. 1914. Price $2.00.

We have always maintained that the neurasthenic is born, not made; that no really sane and healthy man ever becomes a neurasthenic; that the symptomatic conditions which so foolishly are credited with the causation of neurasthenia are, in reality, the results of it, or at least part and parcel of it; that, in fact, nothing within the person can be a cause of his condition, since he himself, as a whole, is a net result of the underlying and backward-reaching conditions that make him a neurasthenic. All this we have persistently and consistently maintained for many years, in the face of the stereotyped formulas of the textbooks. It is, therefore, not a little gratifying to find these views about neurasthenia fully vindicated by no less an authority on the subject than Doctor Hartenberg, in this recent monograph.

After briefly running over all the alleged contributing causes of the disorder, Harten-

berg asks: "But these causes, active and powerful though they are, do they suffice in themselves to produce the neurasthenic state?" And to this he rejoins: "Practical observation forces us to answer, categorically, No." And he continues, "The deep-rooted, hidden factor cannot be looked for elsewhere than in a special predisposition on the part of the nervous system." This predisposition he calls "fatiguability."

We could have wished that Doctor Hartenberg had gone a little further and shown that this "deep-rooted hidden factor" consists in what the biologist calls a lack of ancestral impetus, and thus, once for all, have placed neurasthenia where it truly belongs—in the category of biological disorders. However, like all Frenchmen, he is more concerned with the clinical than with the pathological aspects of the subject. And, after all, this is the more important and useful aspect to the practitioner; so, we will not quarrel with him. Suffice to say that this sensible, scientific view of the nature of neurasthenia gives to his treatment of the condition an equally sensible and scientific quality. This book by Hartenberg, is, in fact (if we may be permitted to use the same two words again), the first really sensible and scientific utterance upon neurasthenia that we have seen in modern times.

NILES: "DIGESTIVE DISEASES"

Diagnosis and Treatment of Digestive Diseases. By George M. Niles, M. D., professor of gastroenterology at Atlanta Medical College. With 1 colored plate and 80 other illustrations. Philadelphia: P. Blakiston's Son & Co. 1914.

One hardly can characterize this book better than by borrowing the author's own description of his intentions, as set forth in his preface. There he declares it to be his purpose to produce a book which shall contain, first, concise but easily intelligible descriptions of the various reliable tests for the objects of study in the gastric contents, the intestinal juices and the feces; second, practicable and least disturbing methods of determining the size, position, and motility of the stomach, bowels, and other abdominal organs; third, a succinct statement of the diagnostic methods indicated for the recognition of digestive diseases; and, finally, an exhaustive discussion both of general and special therapy as applied to these diseases. He further disclaims all intention of furthering the erroneous movement for divorcing gastrointestinal diseases from the broad field of general medicine, to which, he asserts (and we most heartily agree with him), they rightfully belong.

Having thus frankly set forth the aims of his book, it remains for the reviewer only to say whether, in his opinion, these aims have been realized, and whether their realization, assuming it to be attained, justifies itself in its importance and usefulness to the practitioner. On both of these points we register an emphatic affirmative.

The book, in our humble opinion, will prove a most decided acquisition to the practicing physician, who *can not* possibly "divorce gastrointestinal diseases from the field of internal medicine"—and that is more than one can say for the great majority of books that nowadays are being written on special subjects, ostensibly for the general practitioner. Although the title speaks of *one* colored plate, there are really *two*, both of which illustrate the examination of feces. All the illustrations are excellent.

EINHORN: "DIETETICS"

Lectures of Dietetics. By Max Einhorn, M. D., professor of medicine at the New York Postgraduate Medical School and Hospital. New York: Paul B. Hoeber, 1914. Price $1.00.

As might be expected, Doctor Einhorn deals with his subject from a clinical rather than from a scientific standpoint. It is, in fact, a manual of clinical dietary, instead of a treatise on dietetics. Not that we are discrediting or belittling it on that account. On the contrary, this is what, in our opinion, constitutes its peculiar and distinctive value.

The science of dietetics is a most important one, and we cannot have—at all events we do not have at the present time—too many or too thorough textbooks upon the subject. It must be confessed, however, that the perusal of these books too often leaves the clinician in the lurch about the simple, commonsense, practical application of dietetics to bedside practice. This is the side of the subject that Einhorn's little book teaches with simple clearness, and, of course, with the personal authority of a man whose knowledge of the gastrointestinal tract is unique and unquestioned.

The lectures are published in precisely the form in which they were delivered at the Post-Graduate School, no attempt being made

to change the style or beautify the language—another advantage to the reader, who thus occupies the place of an actual listener to the author's words. For our own part, we are particularly impressed with the lectures devoted to the dietary of chronic affections; still, each reader will pick out his own favorite part, and the real fact is that every lecture is equally excellent.

FREUD: "DREAMS"

On Dreams. By Prof. Sigmund Freud. The Only Authorized English Translation, by M. D. Eder, From the Second German Edition. With an Introduction by W. Leslie Mackenzie, M. A., M. D. New York: The Rebman Company. 1914. Price $1.00.

We never could—and we fear we never shall—be able to bring ourselves to follow Professor Freud in all of the ramifications and applications of his remarkable theory. But that does not detract, in our mind, from the greatness and importance of his central position. It is characteristic of every great philosopher—or nearly every one—to attempt to make his system of philosophy "four-square," as the lawyers say, with the universe; and it is equally characteristic of the universe to refuse to be four-squared.

Freud unquestionably has enunciated some very profound and comprehensive principles concerning the realm of the subconscious—principles as epoch-making as Bergson has, within recent years, enunciated in the domain of biologic evolution. And these principles have a tremendous practical importance in the clinical diagnosis and treatment of mental conditions. It is, in fact, no exaggeration to say that they have given us the key to a rational ordering of the mental sphere, as truly as Darwin gave us the key to the ordering of the physical. But, like every profound thinker, particularly every German thinker, Freud is a good deal of a mystic; and mysticism always breaks over the traces.

With the general proposition, that "the interpretation of dreams is the road to a knowledge of the part which the unconscious plays in mental life," we suppose nobody can any longer refuse to agree, since dreams are now pretty generally conceded to represent the outbreaking of repressed mental complexes during the abeyance of the conscious intelligence. This is a sound, scientific proposition, upon which we may safely proceed to practical, clinical corollaries.

However, the doctrine of symbolism, as applied to dreams—while we do not deny that it has a color of reasonableness and science—is as yet so dangerously tinctured with mysticism and parallelism that we cannot accept it as a safe working-basis for any thing.

The greater portion of the little book under review is devoted to an exposition of the symbolism of dreams. It is extremely interesting and suggestive, and evidently is *feeling toward* the truth. But, it should be read with a very critical and discriminating mind.

BODKIN: "DISEASES OF THE RECTUM"

Diseases of the Rectum and Pelvic Colon. By Martin L. Bodkin, M. D. Illustrations specially drawn by Francis A. Deck. New York: E. B. Treat & Co. 1914. Price $3.50.

Twenty years or so ago, every book upon a special branch of medicine or surgery based its claim to consideration upon the distinction and separation which it achieved of the specialty in question from the rest of medical science and practice. Now the tide has turned homeward again, and every book dealing with a specialty announces its intention of expounding the relation of that specialty to general medicine and surgery. Thus, the author of the present work informs us that "the zealous purpose of mastering the relationship of proctology to the many diseases commonly treated by the general practitioner" has been his aim during his long and varied practice—and presumably is the objective of his printed message.

That is a laudable object, and, we must confess, well carried out. Doctor Bodkin has given a plain, simple description of the commoner diseases of the rectum, sigmoid flexure, colon, and anus, and has established the frequent association of diseases of the rectum with faulty conditions in other portions of the digestive tract. Treatment is given a large and important place. Best of all, the entire book, from beginning to end, bears the earmarks of having been written out of the author's own personal experience.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6031.—"Trachoma." I wish J. M. W. would try, a drop twice daily in each eye, of a solution of zinc chloride in water, in the strength of 1 : 5000. Apply cold water to the lids if the smarting that follows is too disagreeable.

"C."

Brooklyn, N. Y.

[It is not at all surprising to hear of zinc chloride as an efficacious remedy in this condition. It has always been understood that some form of electropositive metal, deposited in the trachomatous tissues, is the best stimulant to the absorption of the trachoma bodies; and for the past few years there has been a steady tendency toward abandoning all other electropositive metals in favor of zinc. Almost any oculist will tell you that he gets infinitely more definite results from zinc sulphate than he does from the old copper stick or even a copper-sulphate solution. We have never heard of the chloride salt of zinc being thus used, but it strikes us as being a rational and very promising mode, inasmuch as the chlorine ions in the salt ought to exert a decidedly beneficial influence upon the corneal thickening that always occurs in trachoma. We should be glad to hear from others who have had, or who shall have, experience with this remedy in trachoma.]

ANSWER TO QUERY 6033.—"Deep-Sea Plasma." I cannot see where the treatment with deep-sea plasma has any advantage over the intravenous use of Fowler's solution of the tissue-salts. As for results, I have demonstrated that every condition mentioned under the indications for deep-sea water is as quickly benefited and cured by this solution, and the treatment has very many fewer objections. I have read very carefully the articles by Doctor Arnulphy, of Paris, and Dr. R. H. Stevens, of Detroit, as well as by other writers, and I fail to see any advantage in the plasma over the harmonious solution of tissue-salts. Low vitality, acute infections, neuritis, psoriasis, anemia, asthma, bronchitis, and many other conditions due to infection, defective elimination, and malnutrition, respond beautifully to this treatment.

W. N. F.

Kalamazoo, Mich.

Queries

QUERY 6040.—"Milkers' Cramp." E. W. B., Illinois, asks us what we can tell him about milkers' cramp or milkers' paralysis. He writes:

"I have a patient, a man aged 41, always healthy, who is milking cows—fifteen a day. I think he is getting milkers' cramp, gradually getting worse; his right hand worse than the left. His hands feel numb, pain at times, are worse at night. Would it not be best for him to quit the milking altogether? What is the best treatment? Is this disease common in the dairy districts?"

We regret that the few contributions to medical periodicals of which we know (principally foreign) dealing with the subject of milkers' cramp are not available. In the 18th volume of Ziemmsen's Encyclopedia, A. Brayton Ball, in discussing physical exercise, writes as follows:

"While muscular exercise, so long as it conforms to the law of rhythmic nutrition, increases the bulk and effective power of the muscles, long-continued overexertion, on the other hand, tends to induce a condition of chronic exhaustion and in some instances

even degeneration and atrophy. These results are most frequently seen when the exertion is confined to a comparatively small group of muscles; in more general forms of exercise, prostration usually supervenes before the full extent of the damage is reached. The symptoms of chronic muscular exhaustion are of the same general character as those of acute fatigue; viz., loss of power, pain, cramps, and convulsive movements or spasms. To this special class of paralytic affections, caused by the frequent repetition of particular muscular acts, Hammond has applied the general term 'anapeitatic'; but by most writers the condition in question is variously designated according to the nature of the occupation. Thus, we have scrivener's palsy; telegraphers', typesetters', violinists', pianists', tailors' and milkers' cramp, and so on."

You may know, doctor, that these occupational neuroses are not very amenable to treatment, so that often change of occupation is essential. We should strongly urge this man to stop milking for several months. The hands and arms should be treated by a competent electrotherapeutist (sinusoidal and high-frequency currents prove particularly efficacious), and the arsenates with nuclein may be pushed with advantage. Massage should be advised.

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QUERY 6041.—"Danger From Phenol in Treating Hemorrhoids." H. W. S., Virginia, in referring to the injection-method of treating hemorrhoids, and the technic given in these pages, writes: "You advise injecting 5 to 10 drops of a 50-percent solution of crystal carbolic acid in olive-oil, and to attend to three piles at one sitting. This would mean injecting as much as 15 drops of crystal carbolic acid at one sitting. Is there not danger of phenol poisoning? What eventually becomes of the hemorrhoid so injected? Does it slough or do its contents become absorbed? Are there no contraindications?"

There is little danger: pure carbolic acid, or when it is in oily solution, virtually is harmless. In corroboration of this, we would call your attention to the article entitled "Absurdity of Phenol Poisoning," by Dr. Robert Gray, which appeared on page 172, of the February number of CLINICAL MEDICINE.

This writer years ago pointed out that phenol (from the pure crystals down to any strength below) may be applied locally virtually with impunity, and that dilutions in olive-oil or sterilized cottonseed-oil are equally safe and beneficial. On the other hand, hydroglycerinic dilutions are unscientific and dangerous, and consequently should never be employed in that way.

It must be borne in mind that phenol coagulates blood-serum, so that its action does not extend to the deeper tissues. Prompt coagulation follows the injection of a strong solution of phenol into a hemorrhoid, while, moreover, the coagulum is aseptic, and no inimical germ could enter, much less live therein. Hemorrhoids so injected shrivel away or drop off, with very little sloughing. There are, one may say, no contraindications, except that, as pointed out, one never should inject a "mixed" or an external hemorrhoid. By all means, doctor, read Gray's article, every statement in which this writer heartily endorses.

A solution of carbolic acid and camphor is the best surgical antiseptic this writer knows of. It may be applied freely in clean or infected lesions; moreover, it is an excellent hemostatic. Good combinations are obtained by combining the phenol with menthol, or, also, with camphor and chloral.

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QUERY 6042.—"Sequence of an Electrical Shock." M. M. M., West Virginia, describes the case of a woman, aged 43, weighing 220 pounds; former health fairly good except for some rheumatism, menopause passed. About five years ago, while driving along road during an electrical storm, this woman received a shock in the right hand with which she was holding an umbrella. She is gradually losing use of that hand, and also suffers considerable pain. The doctor wants to know what can be done, beside using electricity, giving strychnine, and bathing the hand alternately in hot and cold water? There is no atrophy of the muscles, which respond fairly well to electricity. All other organs are normal.

Unfortunately, literature on the pathological conditions which may be directly produced by lightning and detected during life is not extensive. However, neuritis unquestionably may be one of the consequences, while any one of the forms of paralysis of the extremities may result. Loss of consciousness occurs to a greater or less extent in all but the very mildest cases, varying through all degrees, from a slight momentary benumbing of the faculties to the most profound stupor. The condition may last a few minutes, hours, or even days.

Pain occurs in nearly all cases, not rarely existing as a direct symptom, in the form of a burning or stinging or constant neuralgia in the limb or limbs affected. Existence of pain in the arms, together with paralysis and anesthesia, lasting three months, has been reported.

Sometimes marked sensitiveness remains for a time in the affected limb, and a certain amount of hyperesthesia always exists in the affected portion immediately after the stroke; more rarely a permanent or lasting sensitiveness to the action of electricity is said to remain. Diminution or even an entire loss of sensation may occur either with or without simultaneous paralysis. Thus, for instance, Balfour reports the case of a boy who said he "could not feel his legs," and another stated that his "arms were cut off." Free reports a case in which there was a loss of sensation in the right upper extremity from the elbow to the fingers and in the left lower extremity from the knee to the toes.

All authorities agree that, as a rule, such loss of sensation is temporary and quickly passes away, but it may last (usually in company with paralysis) for some time. In such cases, organic lesion or traumatic neurosis is to be suspected. The most troublesome sensation experienced is that of numbness, tingling, and formication; also a sense of "pins-and-needles" may occur. As a rule, the deep reflexes remain normal. The superficial reflexes of the parts affected are temporarily increased.

We would suggest that you study carefully the chapters on the treatment of neuritis and neuralgia in "Modern Clinical Medicine: Diseases of the Nervous System." See also volume II of "Medical Jurisprudence, Forensic Medicine, and Toxicology," by Witthous and Becker.

The treatment, to be at all effective, must be based entirely upon a clear conception of individual conditions. Nucleinated phosphates and nuclein, also small doses of arsenic, with the use of the high-frequency current, besides massage of the affected extremity are advised.

QUERY 6043.—"Syphilis. Fetal Death. Gonorrhea." C. W. H., Oklahoma, asks for help in diagnosing venereal disease, he having found his textbooks unsatisfactory. He says that the enlargement of the epitrochlear gland is given as a sign of syphilis, and he asks how soon after the contraction of the disease this enlargement will take place? Pigment spots at the border of the hair are also mentioned: do these occur before the second stage? What other physical markings, he questions, may be looked for that will give any good suspicious evidence that this disease exists? Further questions are:

"What method is advised to determine whether or not there is a chronic or a latent form of gonorrhea? If the microscope is the only recourse, then where is the best locality from which to collect a specimen? How long would a 7-months fetus have to be dead in the womb before its skin would peel while being delivered? Would an acute stage of gonorrhea cause inflammation of the membranes this late in pregnancy, with a resulting miscarriage? Finally, what books are best for the diagnosing of venereal diseases?"

To begin with the end, the most useful books to consult, when diagnosing syphilis, are: Malsbary's "Diagnosis of Syphilis," Browning and McKenzie's "Recent Methods in the Diagnosis and Treatment of Syphilis," and Fournier's "Classical Treatise," recently published by Rebman. Findley's "Gonorrhea in Woman" certainly should be in your possession. If you like, we can procure any or all these books at publisher's prices: Malsbary's, $5.00; Browning and McKenzie's, $2.50; Findley's, $3.00.

As you will readily understand, doctor, to answer your various questions in detail would call for an immense amount of research-work and writing of an extensive article; in fact, a small volume. You will be able to secure all the data you wish from the books mentioned.

The gross lesions you speak of in the third paragraph of your letter—pigment spots, enlargement of the epitrochlear gland, and so on—cannot be found in the earlier stages. The primary sore must be sought for. If the sore itself has healed, a typical scar can be discovered in most cases. Spirochetes can be found in the primary lesions, and within a very few days the Wassermann test is positive.

Chronic or latent forms of gonorrhea can be definitely determined by the exhibition of a dose of 20,000 to 50,000 gonococci (dead): in other words. gonococcic bacterin. If the disease is present in the individual, the Neisser bacillus can be found in the discharge, which will become profuse.

You are familiar, of course, with the fact that the passage of a steel sound or the application of dilute silver-nitrate solution to the prostatic urethra often will cause the reappearance of gonococci in a supposedly cured patient.

The skin of a dead fetus begins to macerate and peel off two or three days after death. Gonorrhea contracted by the mother in the sixth or seventh month of pregnancy would not affect the membranes, neither would it produce miscarriage. You must remember that an existent *chronic* gonorrhea, with recrudescence late in pregnancy, is an entirely different matter. Such a condition often is mistaken for a primary infection.

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QUERY 6044.—"Tumor of Pregnant Uterus." W. R. M., Indiana, reports the case of a woman pregnant seven months at time described; but now at nearly full term, in fact, expecting to be confined any day.

"One night," writes the Doctor, "I was called to see the lady, the husband stating that his wife was 'suffering some and that something had come down and out and was then outside of the vagina.' On arrival at the house, I was informed that for several days she had 'noticed something just inside the vagina, and that after supper it had slipped out.' Examination showed a hard, tough mass protruding from the vagina, about the size of a goose-egg. The mass was dark-red in color and seemed to be lined or fissured irregularly. I endeavored to make a digital examination, but could not feel the womb, the vagina being entirely empty. I replaced the mass and then proceeded to examine, and found the cervix high up and apparently normal. I found the mass to be attached to the floor of the vaginal wall, immediately in front of rectum, by what appeared to be a broad, flat pedicle.

"I advised her to put on a binder and pad, to support the tumor, and wait developments, rather than to operate at that time. Since then the tumor has not again protruded. I have not made another examination. Am waiting for labor to come on; then, if this tumor is in the way, intend to take steps to remove it. I should like to hear from you about this case."

It would seem that your patient suffers from a fibroma, though it is barely possible that you have to do with a vaginal cyst. Such cysts are not common, although the most frequent form of neoplasms encountered in the vagina. As a rule, they are found either in the anterior or the posterior wall. The majority of cysts occur in the lower portion of the canal.

The vaginal cyst as a rule is round, but may become pear-shaped and have a more or less distinct pedicle. The mucous membrane of the vagina moves freely over the surface of the tumor, unless it is inflamed or else atrophied from distention or pressure. As a rule, the walls of the cyst are thin and the folds and rugæ of the vaginal mucosa not defined. A careful examination should enable you to differentiate readily between a cyst and a fibroma.

A fibroma invariably is single and is of slow growth, requiring years, as a rule, to attain a large size; however, it may increase rapidly during pregnancy. Usually they are round, with a broad sessile base. Sometimes the shape is changed by pressure. These growths cause no inconvenience and mostly are discovered by accident. When the neoplasm is situated on the posterior vaginal wall and protrudes, as in this case, it may cause great annoyance. Especially would such a tumor be likely to interfere with delivery. Fibromas usually are hard, the degree of density depending upon the relative amount of fibrous tissue present.

Carefully bear in mind that inflammation, suppuration, and gangrene may occur and severe hemorrhage follow. During delivery the surface of the tumor may become injured and a hematoma result.

As such tumors never form again after removal, operation distinctly is indicated, and it is a pity that you did not prepare your patient for operation instead of applying a binder to retain the growth in the vaginal canal. You must be prepared to take care of this tumor when the woman is delivered. It may be impossible to deliver the child until the growth is enucleated.

It is hardly likely, of course, that you are dealing with a sarcoma. Primary sarcomata of the vagina are observed very rarely; their usual situation is in the lower portion of the canal. Ulceration generally occurs when the growth attains any great size. The surrounding tissues are infiltrated early. A foul watery discharge almost always is present. As soon as ulceration begins, there is more or less hemorrhage; slight at first, but later becoming marked. Pain is not experienced until ulceration starts. On the whole, though, we believe that you may exclude both cyst and sarcoma, and regard this as a fibroma in the posterior wall of the vagina. We hope to get your report on the outcome of this case.

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QUERY 6045.—"Invagination of the Bowel." G. W. M., Washington, wishes us to point out where he erred in the following case:

"A baby of 18 months became sick on Friday with a slight diarrhea and vomiting,

and hemorrhage occur. The prognosis in acute cases always is very grave. Perforation or peritonitis must always be anticipated. Spontaneous recovery has occurred through automatic processes, but there is even then grave danger of intestinal stricture and permanent obstruction.

The much-talked-of sausage-shaped tumor cannot always be felt, and, in fact, seldom is felt; but, given, in young children, abdominal pain, vomiting, bloody stools or none at all, it is safe to diagnose intussusception.

However, the treatment nearly always is operative, and, as pointed out, it is now accepted as the rule that the moment fecal vomiting occurs the abdomen should be opened. If a diagnosis can be made, the sooner operation is done, the better chance there is for the child.

Palliative measures consist in the injection of water high into the bowel, a very low pressure being used. The reservoir in such cases should never be more than three feet above the buttocks, which should always be elevated above the shoulders. This measure must be applied early (within twelve hours); and even then used with caution. A very low head of water has caused perforation. The giving of purgatives is a grave mistake.

To sum up. The sooner diagnosis is made, the better for the patient. Early, we may try to reduce the invagination by means of warm saline enemas, used as directed; but, if the condition has existed for twelve hours and fecal vomiting is present, operation is imperatively demanded. Early intervention has proved successful in a large proportion of cases.

Under the circumstances, doctor, we feel that we must express the opinion that you erred in attempting to reduce the condition by means of milk and molasses enemata. The child should have been operated upon, on Tuesday morning at least.

QUERY 6046.—"Multiple Skin Tumors." W. M. F., Alabama, writes: "I have a case under observation in which I should like your advice. The man is 65 years old and has been in bad health for many years; the result, I think, of malaria and bronchitis. This, however, is not troubling him much at the present time.

"What I wish your advice for is, he has growths or tumors nearly all over him, but mostly on the arms. They vary from the size of a pea to the size of hen's eggs. They seem to resemble wens somewhat, except that they seem to adhere to the skin. They do not seem to be sore, except a large one, which is on one of the buttocks, and this is in the way when he is sitting down or lying on that side."

It is impossible for us to outline effective treatment for your patient without a clear idea of the underlying conditions. Make a very thorough physical examination, then report your findings. Your patient may suffer from mycosis fungoides. The first stage shows itself as an erythematous or eczematous lesion; later, more or less infiltration occurs; finally, tumors varying in size from a pea to an orange, with a disposition to become superficially ulcerated, may be observed. It is a very rare affection, and incurable. Can syphilis be positively excluded?

Dermoid myomata occasionally are observed after middle life, the growth beginning as an ecchymosis. The lesions generally appear as pale rose-colored, rounded or oval papules, which later develop into tumors, usually pink or reddish colored, and elastic to the touch. The sides of the face and the arms are the usual sites. They generally increase in size and number, though at times spontaneous involution takes place. Treatment consists in their removal by excision.

Molluscum fibromata are connective-tissue newgrowths appearing as sessile or pedunculated, pea- to egg-sized, soft or firm, rounded or flattened, painless tumors seated just beneath or in the skin. Hundreds of such growths may appear upon the body of a single individual; the upper part of the back, chest, abdomen, and arms being favorable sites.

Hard fibromata (desmoid) rarely become larger than a pea, and usually occur singly or as several scattered solid growths covered by normal skin. They are sharply defined, round or oval, smooth and compact, and movable. They appear insidiously and grow slowly. Surgical measures alone are of service.

It might be well for you to excise, under local anesthesia, one of the smaller tumors and submit to a pathologist for examination.

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What Can the Doctor Do For Himself?

THERE is one question which exercises our mind with unremitting persistency; which goes to bed with us at night and gets up with us in the morning; which runs in our mind, like a perpetual refrain, as an undercurrent to all that we say or do. That question is: How can the condition of the general practitioner be improved so that, at all events, he may reap *something* of the harvest of advantage which modern progress and modern proficiency ought to bring him?

There is no question that twentieth-century medicine is a vastly more efficient thing than was the medicine of twenty-five and fifty years ago. And, since medicine finds its expression in its practitioners, the twentieth-century physician is a far more efficient practitioner than was the doctor of the past.

However, higher efficiency should bring better returns—a better average of returns—and we doubt very seriously whether the general practitioner, as a class, is getting even a fair proportion, to say nothing of the full quota, of the benefit that he ought to be deriving from the advancement of his science. Nay, we have no doubts at all on the subject—we know that he is not.

The service rendered by the doctor of today is beyond all comparison with that rendered by yesterday's physician. His training, his qualifications, his equipment, the organized facilities at his command—nothing was ever seen like it in the history of medicine. And his results are equally ahead of anything in the past. Does, then, the practitioner get a commensurate relative return—an economic return, we mean—for all this superior service? If not, why not? Echo answers, "Why not?" There's the rub. And we do assure you we have rubbed and rubbed, until the hair on the side of our head is almost worn off, in an anxious effort to solve the problem; until, in fact, we have reached the conclusion that we are not sufficient for the task.

In sooth, this is not a problem for one poor, limited, burdened editor to solve over his office-desk. If it is to be solved at all, it must be by the united experience and suggestion and action of all of our readers. It is not by what I (the editor) may say to you, but by what you (the readers) shall tell me, that help shall come. If I can not rouse you, or some of you, to sufficient interest in the matter to speak out your thoughts and your experiences and propos

als, I might as well drop the subject and quit worrying about it at all; for, a monologue is of no use here.

But I do not believe you want it dropped. I do not believe you can afford to let it drop. We are constantly hearing the reproach leveled at medicine, that it is being "commercialized"; and then, in the same breath, the same critics tell us that the physician is a poor business man.

I don't take much stock in either accusation. Stripped of its apparent harshness, this "commercializing" of medicine simply means that the economic factor is being recognized and reckoned with; and this is not a bad thing, but, rather, a mighty good thing. For, as I have many times pointed out, it is not until it acquires an economic stimulus that any movement accomplishes anything worth while; and medicine's tremendous progress in the last twenty-five years has largely been owing to the entrance of this factor.

On the part of the general practitioner, this so-called "commercial" factor (prefer to call it the economic factor), so far from being overdone, has not been played up enough. I think that, perhaps, he has been intimidated by this bugaboo of commercialism into the idea that the economic aspect of his work was something to be ashamed of. That, of course, is nonsense. It is a very vital aspect, both to himself and to medicine at large, to say nothing of the public, and a reasonable consideration of it is both proper and necessary.

The great majority of physicians in the last two decades have been stimulated, by the spirit and competition of the times, to improve their working-conditions, equipment, and other elements, thus making themselves that much the more efficient; and, when you come to think of it, a large part of this wholesome stimulation has come from the "commercial" side.

The numerous progressive concerns that persistently have produced newer and better and more efficient materials and appliances, and advertised them to the profession, have been, we unhesitatingly declare, one of the most powerful driving forces in the increased efficiency of medicine and the medical man.

There can be no question that hundreds —yes, thousands—of the readers of CLINICAL MEDICINE have been almost involuntarily led into better and higher efficiency by walking, month by month, through the exhibit-gallery of up to date products and appurtenances furnished in its advertising pages. But of his own economic interests the doctor has, to a large degree, been strangely inconsiderate, and he is not getting proper returns for this advancement that has been forced upon him.

As to the physician being a poor business man, I do not believe it. There is nothing inherent in the doctor that should make him any poorer business man than is anybody else. It is simply that he either has not awakened to the importance, in his own case, of the very economic factor to which he owes most of his increased efficiency; or (what is more likely) he, like ourselves, does not quite see how to take advantage of it.

But some, at all events, must be good business men. Some must have solved the problem, at least in this or that direction.

It is to these latter men that we appeal for suggestion and help. Break your "conspiracy of silence" and speak out in meeting. Write, WRITE, WRITE, with or without your names, for publication, and tell an anxious editor, and a still more anxious profession, just how you have made the advantages of modern practice yield you better returns and improve your own condition.

How have *you* added to or readjusted your work, or your methods, or your relations with your patients, or your scheme of charging, or any of the phases of your practice, so as to get something, at least, of what is coming to you in these days of greater outlay and more exacting demands? And again I say, *write.*

In general, it is with advice as it is with taxes—we can endure very little of either if they come to us in the direct way. They must not thrust themselves upon us. We do not understand their knocking at our door; besides, they always choose such inconvenient times, and are forever talking arrears.

WHAT IS TRUE COURAGE?

In this, as in most matters of psychology, the world's estimate is superficial and silly. The real gamut, in fact, runs in precisely the opposite direction to that by which the world gauges the quality.

Highest in the world's scale of heroism is the cool, careless audacity that marches into the mouth of the cannon with a flower in its cap and a frivolous song on its lips, as serene as on parade. Such bravery is really the very lowest in the scale—if, indeed, it be in the scale at all, except in the sense that

zero is a part of the scale. It is not courage at all, but sheer lack of sensibility either from ignorance or from accustomedness. It is, in quality, the same mental attitude in which the ignorant, impassive mine-worker walks around in the fire-damps; and when they explode, he too becomes a popular hero.

Next highest in the world's gauge—next lowest in the true scale—is the courage that dares a quick danger in a sudden emergency. In itself, this is hardly a more genuine brand of courage than the first, except that it involves a more or less unselfish disciplining of the man previous to the demand that is made on him. Even so, it is more a matter of habit than of quality. The fact that there is no time to count the cost robs it of any deliberate merit. Many a man, in fact, is surprised into a heroism which is really no part of him. Certainly it is no high grade of courage. Rather, let us say, it is a negative sort of quality, to which, if a man does *not* respond on demand, we conclude there is some positive quality of poltroonery about him.

Still lower in the world's estimation—still higher in actual worth—is the courage which calmly and deliberately holds its course of duty, in the face of almost certain calamity and misfortune; the quiet resolution to meet one's fate, in the face of foregone disaster and disappointment; the steadfast setting of one's face to go to Jerusalem. Of all forms of heroism, none will so surely win the love and confidence of human hearts, which is worth a hundred times the admiration of human minds, than this.

Higher yet in the true scale—lower yet in the popular gauge—is the courage that sustains itself, as it were, upon nothing but its own unconquerable stamina. The man who, though his fights be all defeats, still fights; who, though he has been a failure in the past, and knows himself (as many a keenly sensitive man knows himself) to be a failure, and is doomed to be a failure for the rest of his life, rises patiently and indomitably every morning to face the inevitable defeat of the day, with equanimity and sweetness; there is a courage, my masters, of which the kings and victors of the earth are not capable.

But there is yet a higher quality of courage, the highest of all in the true scale, but so little esteemed in the popular mind that it will hardly be accorded a place in the scale at all, unless, as I said in respect of the first type, to be zero is to be a part of the gauge. It is the courage of cowardice; the bravery of the man who is afraid, but who, in mortal funk and abject fear, with throbbing heart and sweating brow, forces himself to do the thing from which he shrinks. This, which the world sneers at as cowardice, is the highest courage of all. In fact, it is the only true courage. For it sets all the agonized effort of a man's soul against all the fears and terrors that the powers of darkness can bring upon him.

Ring out, wild bells, to the wild sky,
The flying cloud, the frosty night;
The year is dying in the night;
Ring out, wild bells, and let him die.

Ring out the old, ring in the new,
Ring, happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

Ring out old shapes of foul disease;
Ring out the narrowing lust of gold;
Ring out the thousand wars of old,
Ring in the thousand years of peace.

—Tennyson.

AMERICAN TETANUS ANTITOXIN GOING ABROAD

It should interest American physicians very much to learn that there is promise of a tetanus-antitoxin famine in this country. Within the last sixty days, enormous orders for this remedy have come in from Europe, where the antitoxin is administered to wounded soldiers to prevent the occurrence of lockjaw, which is one of the most common and deadly complications of the wounds of war.

We learn that virtually every large commercial serum-laboratory in this country, as well as a laboratory maintained by a great municipality, is disposing of its surplus output to the French, Russian, and other European armies. Since it takes from six to nine months to produce tetanus antitoxin, there is considerable likelihood of a famine in this indispensable commodity.

Tetanus antitoxin is now employed by virtually every surgeon of standing, as a prophylactic in the course of treatment of incised or contused wounds. Thus used, it can be depended upon to prevent the occurrence of tetanus, a disease which by no means is confined to the summer months.

In view of this threatened antitoxin famine, we cannot too strongly urge all American physicians to provide at once for

a supply of this remedy before prices advance, as they are almost sure to do. Whatever happens abroad, it is important that our own people in the United States are taken care of.

We are oftentimes in suspense betwixt the choice of different pursuits. We choose one at last doubtingly and with an unconquered hankering after the other. We find the scheme we have chosen answers our expectations but indifferently—most worldly pursuits will. We therefore repent of our choice and immediately fancy happiness in the paths we declined; and this heightens our unhappiness. We might at least escape the aggravation of it. It is not improbable we had been more unhappy but extremely probable we had not been less so, had we made a different decision.—Shenstone (an old philosopher).

THE TRUTH ABOUT BACTERINS

A few days ago we received a letter from a reader of CLINICAL MEDICINE who is anxious for more information regarding bacterins. "I want to find out," he said, "why it is that sometimes I get results so brilliant as to seem almost miraculous, while in the very next case I may fail absolutely."

The doctor's problem is a hard one to solve. However, if we were to try to formulate our own views in a single paragraph, our reply would read something like this:

Therapeutic success is due to the accurate fitting of a remedy to disease conditions. This applies to the use of bacterins, just as it does to the use of medicines. Failure comes when the remedy does not fit the disease, and this is especially likely to be so when no bacteriologic diagnosis has preceded. It is just as foolish to give a staphylococcus bacterin for a coli infection, as to administer salvarsan to cure eczema.

The truth of the whole matter is that bacterin therapy has degenerated too much into a sort of shotgun method of prescribing. It is just as irrational to give to some patient merely, "by guess and by gosh," a mixed up hodge-podge of from five to twenty different dead bacteria, when you don't know whether any of these bacteria are responsible for the patient's ailment, as it is to give a mixture of as many different drugs sold under some fanciful name and alleged to be "good for" dyspepsia, diabetes or ingrowing toe-nails, as the case may be.

Bacterin therapy has suffered most in the houses of its friends. There has been too much of a tendency to encourage the idea that the doctor can "guess" at the character of the causative bacteria, and then cure his patients with a chance shot of some mixed stock bacterin. No doubt he may guess right in a considerable percentage of cases; for instance, in acne, furunculosis, and tuberculous fistula. In such conditions, he may be, and very likely will be, justified in proceeding in his treatment immediately, without waiting for the report from the laboratory. Nevertheless, such a procedure is not scientific, and such therapy is foredoomed to failure in many instances.

The best results will always follow the exact fitting of the remedy to the disease, and those practitioners will get the largest percentage of brilliant cures from the use of bacterins who insist upon securing specimens of the patient's wound and other secretions for bacteriologic diagnosis.

Very frequently, it is true, the stock bacterin will prove quite as effective as will the autogenous bacterins, and by using them much valuable time often is gained. On the other hand, in chronic cases or in badly mixed infections, resort to autogenous bacterins almost invariably is preferable. They are so readily made and they have become so cheap, while they give such brilliant results when properly used, that we cannot understand why any physician should neglect to employ them in such conditions. Nevertheless, the majority of infectious diseases do well under stock bacterins, and a complete "battery" of the most common of these should be readily available for every physician.

Another truth about bacterins which the profession is just beginning to learn is that they cannot be depended upon to replace medicinal treatment. Only rarely can best results be obtained by using them alone. The best plan undoubtedly is, to use them conjointly with the best medicinal treatment available. Thus used, in properly indicated cases, they are much more likely to bring about the patient's recovery than when depended upon to the exclusion of drugs.

Especially desirable in bacterin treatment is resort to measures to increase the patient's resistance. Bacterins are only efficient when their administration is followed by a powerful reaction. Such a reaction demands for success the essential integrity of the vital forces. In acute diseases, therefore, in which the patient's resistance is becoming feeble, the use of remedies to support the heart and strengthen the tone of the nervous system not only is desirable, but actually indispensable.

Another thing—to produce active immunity in practically all diseases, there must be leukocytosis. For instance, opsonic activity, upon which bacterin therapy largely depends, requires an ample supply of phagocytes to engulf and destroy the invading micro-organisms. How essential it is, therefore, to stimulate leukocytosis, and how better can this be done than by means of nuclein? There is no doubt whatever that the very best results can be secured from bacterin therapy through the associated administration of this remedy. This is a point which some of our own readers have been quick to grasp, but which has been neglected by most physicians. Nuclein therapy and bacterin therapy are mutually supportive.

And here is another truth. Different bacterins vary greatly in value. The typhoid prophylactic and the various acne, staphylococcus, streptococcus, and bacillus-coli bacterins have attained an established and unshakable position in therapy. As to their value, there cannot be the slightest question; but, the gonococcus bacterin, so much lauded as a cure for gonorrhea, seems to have little or no value in the acute stages of the disease. In gonorrheal arthritis and in chronic localized gonococcus infections generally, it is undoubtedly a meritorious preparation.

There is the same uncertainty of action with regard to the pertussis bacterin. While this preparation has been extravagantly praised by a few physicians, there is a growing opinion among practitioners of large experience that it is of little value. Frankly, we have far more faith in the use of atropine and calcium sulphide, given to effect, in the treatment of whooping cough, than we have in the vaccine made from the Bordet-Gengou bacillus.

Finally, if we may sum up in a few words of advice to the general practitioner our opinions with regard to the bacterins, we should put the matter about as follows:

1. If there is the slightest question as to the nature of the bacteria causing any ailment, acute or chronic, insist upon securing a bacteriologic diagnosis. In acute cases, where time is a factor, the administration of a suitable stock bacterin should begin at once—but, in any event, find out what bacteria are present.

2. In chronic cases and those of mixed infection, instead of resorting to a shotgun bacterin mixture, one containing a half dozen or more different organisms, procure and use an autogenous bacterin, unless you can closely fit the bacteriologic indications from your supply of stock bacterins. You will get far more brilliant results, and the increase in expense will be relatively slight.

3. In practically no case can best results be obtained from the use of bacterins alone. Insist upon applying the proper medicinal, surgical or other treatment in every case.

4. Remember that vital resistance and cellular reaction are essential to secure best results from bacterins. Unless the supply of leucocytes is ample, the disease-producing bacteria will not be phagocyted properly. By using nuclein in ample dosage, frequently repeated, the therapeutic efficiency of the bacterins will be greatly intensified.

5. Different bacterins vary greatly in value. There are some, like the typhoid prophylactic, which are practically universally curative or prophylactic. Others, like the acne, streptococcus, and staphylococcus bacterin, are generally meritorious, but not always curative. Still others, like the gonococcus and pertussis bacterins, are of doubtful utility, and while they may and should be used, the main dependence must be upon medicinal treatment.

By following these simple rules, constantly keping in mind the *specific* action of the bacterins, as well as the importance of other equally vital factors in the establishment of active immunity, the percentage of your "miracles" will constantly increase.

FRESH BLOOD WANTED!

We want blood! No, not that of any particular individual—not the blood of the Germans, or the English, or the French, or the Russians. We just want to stir the blood of those of our readers who have never heretofore contributed to the pages of CLINICAL MEDICINE. There are thousands and thousands of men who read the journal every month, and who write us that they like it; yet, have never given us a single line for publication. We want to hear from these men. Make it personal, doctor—we want to hear from *you*; and we want things which are of practical value, not long articles, not theories, but actual records of actual experiences in the treatment of diseases—in other words, therapy.

Our good friend Doctor Ellingwood, of *The Therapeutist*, prints the subscription

price of his journal as being "One dollar and one therapeutic item." We want the therapeutic item, but we don't want you to wait until you renew your subscription before sending it in to us.

While this invitation is intended primarily for the new men—the new blood—we hope it won't discourage any of our old friends whose contributions we appreciate so much. Let everybody take a hold and help. Let us fill CLINICAL MEDICINE so full of helpful material during the next few months that it will become absolutely indispensable, not alone to the thousands of men who now read it, but also to the thousands of others who ought to read it and will do so if we all do our part.

Get out your record of cases, doctor, and make it the basis of a short article for our next number.

Men themselves are makers of themselves by virtue of the thoughts which they choose and encourage. A noble and God-like character is not a thing of favor or chance, but is the natural result of continued effort in right thinking.—James Lane Allen.

IDEAS THAT HAVE MADE MONEY

In the preceding editorial announcement, we extended an invitation to everybody to write something for CLINICAL MEDICINE. We hope to embody a lot of the communications we expect to receive from our friends in a series, or symposium, to be entitled, "Ideas That Have Made Me Money." There is not a reader of this journal who has not at some time in his career stumbled upon, discovered or picked up some line of treatment which has added to his bank account.

One reader of CLINICAL MEDICINE not long ago wrote us that one item which he got from this journal within the next few months brought him in $200. We want to provide an "exchange" for such ideas. CLINICAL MEDICINE submits itself as the medium.

Who will be the first to submit a money-making idea?

ARGUMENTUM AD TINCTURAM

The Therapeutic Digest comes back at us in its September issue. Its editor believes in consistency. So do we, but there is only one basis for laudable consistency, and that is truth.

Most men really seek to follow truth, but they depart widely from each other in the pursuit. Yet truth is absolute, unvarying. The difficulty lies in men's varying views and conception of truth.

The *Digest* believes in and advocates green drug tinctures, deeming them excellent medicinal plant preparations. So do we. It believes that by employing the still-alive green drugs certain valuable principles or qualities are retained, that are or might be lost if drugs previously dried are utilized. A very attractive proposition, possibly true, but as yet no proof of the hypothesis, in the modern scientific sense, has been presented. That a few or many clinicians have administered these tinctures and the patients got well, may mean much or nothing at all. There is no definite proof in such testimony, only inference and probability. That these same practicians declare the green-drug tinctures superior to the dried-drug tinctures is worthy of consideration; but we must also consider that other observers are of the contrary opinion, and declare they find the dried-drug tinctures stronger, more uniform, and less liable to deterioration. Moreover, some may claim that the vital or volatile principles in some plants are not conserved or may even be killed by alcohol. If we judge by a vote, the vast majority of drug houses manufacture the dried-drug preparations and the vast majority of physicians prefer them. The official pharmacopeia recognizes them only.

It is, therefore, a matter of opinion, and both sides may have honest, capable adherents, who give legitimate reasons for their preference.

When we say that atropine dilates the pupil, we state a fact that nobody can deny. The same is true as to the action upon the vital functions exerted by strychnine, aconitine, morphine, quinine, berberine, emetine, and pilocarpine. We know what each will, must, and does do, to influence certain vital functions. There is no dispute as to these facts.

In applying these agents, we seek to detect in the sick person the derangement of vital function, and then apply the remedies that restore that function to normal activity. If the vascular tension is too high, we give veratrine until the tension is relaxed to normal. By removing the phenomena of disease we restore health. There is not and cannot be, any dispute as to the efficacy of drugs so administered. That is exactly our claim for the alkaloids, of certainty in action as compared with galenics.

Naturally, in trying out the power of the alkaloids, we follow the lines indicated by previous experiences with the parent drugs. Experiences with belladonna, nux vomica, cinchona, opium, and jaborandi, point the way to probable success with atropine, strychnine, quinine, morphine, and pilocarpine; because in the remedial effects of the parent plants we recognize the constitutional activities of the alkaloids mentioned. But in very many cases the latter are to be preferred on account of certainty in quality and quantity of action.

Here we must point to a fundamental error in the reasoning of our friend. He explains that the parent plants possess other potential activities that modify those of the principal remedial constituents. True, but nature develops all these for the plant's uses, not for ours. If she develops 25 per cent of morphine in one lot of opium and none at all in another, it is to meet certain conditions of the poppies, and not with a view to their ultimate utilization by man. Hence, in adapting these plant educts to our uses we must meet variations designed for the plant's conditions. Let us get rid of the notion that God foresaw that Johnny Jones would eat that peach of emerald hue, and would need just that much morphine, etcetera, in the poppies growing across the world, to be made into paregoric. Much simpler would it have been to blight the blossom whence sprang the peach.

Much simpler is it, instead of relying on the chance combinations formed by nature to meet plant conditions, to extract each of the active principles and combine them ourselves, to meet the patient's conditions. Thus we get such decided therapeutic potentialities as are expressed by the alkaloids in general use, and those rapidly coming into similar favor. Thus we obtain the brilliant successes of emetine in dysentery, hemoptysis and pyorrhea, instead of the uncertainties of ipecac; the sure and powerful sedation of gelseminine instead of the irregular and questionable action of jesamine; the sure and tremendous elimination of pilocarpine instead of the possible shutting off of secretion induced by jaborandi.

A drug when administered should exert effects as certain as the surgeon's knife. What is there to hinder such certainty but the use of uncertain drugs? The surgeon does not dissect out tissues with a lump of iron ore.

Now our friend of the *Digest* always advocates the green-drug tinctures. He never by any possibility finds them unsuitable, or in any manner inferior to any other form of medicaments. He would like us to occupy a similar attitude toward the alkaloids —always alkaloids and nothing but alkaloids. It would be so much easier to whack us!

But we never have and we never will be put in this position. We employ the alkaloids when they are our best resources. We utilize the indications derived from the parent drugs whenever it is evident that it is the alkaloidal effect that proved useful in establishing these indications. Whenever we find better results follow the galenics we use them. And we have used green-drug tinctures with excellent results and are glad to say so!

The real objection to our position is its impregnability. It is absolutely ethical. The shafts of ridicule and the 16-inch shells of argument fail before the simple statement that in all cases we use what we believe best for our patient, be it what it may.

Once to every man and nation comes the moment to decide;
Then it is the brave man chooses, while the coward stands aside,
Doubting in his abject spirit, while his Lord is crucified.

Truth forever on the scaffold, wrong forever on the throne;
But that scaffold sways the future, and behind the dim unknown
Standeth God within the shadow, keeping watch above His own.

—Lowell.

HYGIENE OF THE MOUTH, AND THE PUBLIC

In a recent number of *The Associated Sunday Magazines,* there appears an excellent popular article from the pen of Dr. Edwin F. Bowers, on the subject of "Teeth and Health."

Doctor Bowers has been doing yeoman service in the popular dissemination of what may be termed the common sense of the science of health. He has the knack of writing interestingly and breezily, and at the same time convincingly, in tune with the advanced scientific knowledge; and there is no doubt that such writing, in the popular journals, reaches a much larger public and exercises a far wider influence than all the official pamphlets and quasi-professional lectures from hall platforms.

The gift of interpreting science—especially medical and hygienic science—into the language of the people, without sacrificing any of its authenticity, is a rare one, and Doctor Bowers is to be felicitated upon his ability in this direction.

The Doctor is to be especially congratulated upon tilting his lance in this crusade upon oral evils. It is both timely and important. Since dentistry, which came from out the deep of medicine, has begun to turn again home, so that the dentist has become interested in the medical aspects of dentistry and the doctor in the dental aspects of medicine, the subject of hygiene of the mouth, which for years was a huge joke, has taken on serious and business-like proportions. We really have awakened to the important role that the teeth play in the general health, both on account of their effect upon digestion and also by reason of the absorption of pus and germs from diseased teeth and gums into the gastrointestinal tract and the blood-stream.

It may not be exactly true, as Horace Fletcher asserts, that "the whole question of nutrition is settled in the first three inches of the alimentary canal," but there is a good deal of truth in the statement. There are many people today who are making a great deal of fuss about the purity of the food that they eat, whose teeth are so unclean and decayed that they cannot chew a single bite of food without mixing into it all sorts of bacteria. And the startling truth which Doctor Bowers so powerfully emphasizes no longer admits of the slightest question—it is, in fact, no longer startling to us who are behind the scenes, so to speak—defective teeth and unclean mouths *are* sinister factors in social and economic unfitness.

This subject, like many others that modern health-crusades are bringing to light, has passed the stage (if it ever properly belonged there) where it was an individual matter between the patient and his medical (or dental) advisor; it now occupies a place among the proper topics for public education and instruction, for the purpose of increasing human efficiency. It is not only a legitimate topic for popular exploitation, but it is one which calls loudly for just such popularizing illumination as Doctor Bowers brings to it.

It is, furthermore, worth remarking that in the past few years medicine and dentistry have made wonderful strides in the prophylaxis and treatment o foral and dental conditions. Working side by side, in the most advanced fields of clinical and laboratory research, they have together discovered and developed some highly valuable and practical things. As we have said, oral hygiene is no longer the farce that it used to be. It is abreast with the rest of our twentieth-century medical sciences. We are able to go to the public with a good face, and urge upon them the care and preservation of their teeth, because we can, in the same breath, give the mrational instructions, and bring them in our hands the adequate means for carrying out our advice.

The latest, and most conspicuous triumph in this respect is the conquest of pyorrhea—unquestionably the most widespread and destructive of all the enemies of good teeth. If, as seems reasonably certain, the specific curative action of emetine in this distressing disease shall justify the apparently definite provings which have been made of it, then, indeed, we shall be in a position to bring to the people a gospel of glad tidings. Even yet, to our unaccustomed minds—timid that we humans are of all good news! it seems almost too good to be true. But the most careful and cautious provings of our most conservative and authoritative investigators have practically no room for doubt. With this in our hands, we may well blow the trumpet of oral hygiene and efficiency a hundredfold more loudly and certainly; and our friend Doctor Bowers may wind upon it more persuasive numbers than he has yet felt free to do.

When a man habitually gives the same greetings, always advances the same arguments, forever asks the same questions, and never misses an opportunity to spring his favorite joke, he soon acquires an intellect with all the potency of a rubber stamp.

EMETINE—A "DOUBLE-BARRELED" SPECIFIC

During the last few months, we have had occasion to say a good deal in these pages about emetine; and there have been excellent reasons for the space devoted to the discussion of this drug.

When Rogers, of Calcutta, demonstrated that in the pure, crystalline alkaloid of ipecac we had a definite *cure* for tropical dysentery, one of the great scourges of the world, he ushered in an epoch in the history of medicine. From that day on, emetine took rank, as a specific, with quinine

in malaria, salvarsan and mercury in syphilis, and antitoxin in diphtheria.

Nor is that all. Within the last six months, the discovery has been made by Barrett and Smith, of Philadelphia, a discovery verified by Bass and Johns, of New Orleans, that emetine is, in addition, specific for another devastating disease—pyorrhea alveolaris. All the evidence available seems to show that it is just as definitely curative in this disease as it is in dysentery.

I hope every reader of CLINICAL MEDICINE will read the abstract of Doctor Bass's article, which appeared in last month's issue, on page 1000, also his article on page 1106, this issue. There have also come to our attention reports of a number of cures of pyorrhea following the administration of emetine, in severe cases, which had failed to respond to other methods of treatment. For instance, we know of one New York dentist who employed this drug in a case in which pyorrhea affected virtually all the teeth in the patient's mouth. The gums were spongy, the gingeval sacs were exuding pus in large quantities, and the teeth were loosening. The patient was in very poor health, as a result of the condition of the mouth. After a few days' treatment with emetine, the clinical picture was changed for the better in a manner and degree which were simply marvelous.

There is no doubt that what was accomplished in this instance can be accomplished in thousands of others. And it should be remembered that, in curing pyorrhea, the dentist or the physician giving this treatment is undoubtedly preventing other more or less remote but crippling diseases, since it is now believed that a large percentage of the chronic arthritides (arthritis deformans, for instance) are caused by pyorrhea.

It will be seen, therefore, that emetine possesses the unique distinction of being the one remedy in the world that apparently is a specific for two separate and distinct diseases. It cures tropical dysentery, and it cures pyorrhea. In addition, its power of checking internal and external hemorrhage (especially hemoptysis) promptly has been demonstrated again and again, and the number of successes is constantly growing; and it still retains its place as one of the most valuable remedies at our disposition for the relief of the dry cough and viscid expectoration, which is so characteristic of various stages of bronchitis and pneumonia.

We cannot urge upon our readers too strongly the importance of a careful restudy of this alkaloid.

Party spirit incites people to attack with rashness and to defend without sincerity. Violent partizans are apt, when they argue with an opponent, to make the question personal, as if he had been present, as it were, and a chief agent in all the abuses which they attribute to his party. Nor does the accused hesitate to take the matter upon himself, and in fancied self-defense to justify things which otherwise he would not hesitate for a moment to condemn.

FOOT-AND-MOUTH DISEASE

The growing importance of comparative medicine must be apparent to every physician. Time was when there seemed to be a wide gulf between man and other animals. Thanks to his superior intellectual development, the man had arranged an excellent classification of the vertebrates and placed himself at the head of the list; yet, after all, every human being is an animal, and the experience and observation of years tend to lessen the distance that we formerly thought separated us from other less highly developed creatures.

Of course everyone has noticed in the press the reports of the extensive outbreak of foot-and-mouth disease now prevailing in Michigan, Indiana, Illinois, and other states. This epidemic is highly important to physicians as well as to veterinarians, not only because one of the sources of our food is imperiled and one of our great national resources in danger, but, also, because it is one of the many animal diseases that is transmissible to man. For this reason particularly, physicians who practice in the infected regions should be prepared to assist in maintaining the rigid quarantine that must be established against this highly contagious disease.

For centuries foot-and-mouth disease (aphthæ epizooticæ) has repeatedly swept over Europe, but on account of the few and limited outbreaks in the United States, and the vigorous measures adopted for its repression by the federal government, until the present it has never attracted much attention in this country. It is caused by a filterable virus. At room temperature and in daylight the organism loses its virulence within twenty-four hours, and heating to 70 degrees C. destroys the virus within ten minutes. Under favorable conditions the virus has been kept for three or four months.

The infection is spread by contact, as well as by the saliva, milk and excreta from infected animals. No one should visit infected farms, stables or other places without carefully disinfecting himself and his clothing afterwards, particularly the shoes.

Foot-and-mouth disease is most commonly observed in cattle, less frequently in sheep and swine, and rarely in horses or in the carnivorous animals.

The symptoms of foot-and-mouth disease usually appear within from two to seven days after exposure. There is a rise of temperature from 2 to 6 degrees above normal, and vesicles begin to form in the mouth, on the feet, and on the udders and teats of females. These vesicles vary in size from that of a pea to that of a silver dollar; they soon burst, discharging a watery fluid and leaving behind a raw, sensitive area. There usually is a discharge of frothy saliva from the mouth and frequently a peculiar smacking sound is made as the animal moves its jaws. Animals are unable to eat coarse food and they frequently hold the mouth open on account of the pain. Also to alleviate pain in the feet the animal may shift its weight uneasily from one leg to another.

Besides the unknown virus, the fluid in the vesicles may contain other organisms, particularly staphyloccoci and streptococci, that may otherwise materially modify the course and symptoms of the disease. The acute symptoms usually subside within ten days, and then convalescence begins.

As a rule the mortality among animals is not high, varying from 2 to 20 or 30 per cent, according to the virulence of the different outbreaks, which varies greatly. The greatest economic loss results from the falling away in flesh of the affected animals, the loss in milk production and the embargoes placed upon the shipment of animals and animal products from an infected region. One attack of foot-and-mouth disease confers immunity, and vaccination to produce immunity is sometimes practiced in a region that is permanently infected.

In virulent epizootics of foot-and-mouth disease the infection is frequently transmitted to human beings through raw milk, cheese, and butter, and it is occasionally contracted by contact with infected animals. In man the disease usually occurs in a mild form, except in children, in whom it may be associated with a gastrointestinal irritation that may cause death.

Bussenius and Siegel report 16 epizootics from 1878 to 1896, in the course of which entire families and even the inhabitants of townships became infected. During three different outbreaks, 36, 23, and 16 deaths occurred.

The following symptoms are usually observed in the human patient: There is rise of temperature, with some associated gastrointestinal irritation, together with headache, dizziness and mental dullness. The mouth becomes dry and the mucosa is reddened; blisters form on the lips, gums, the edges of the tongue, and on the inside of the cheeks. The vesicles burst and the epithelium is soon re-formed. Vesicles sometimes appear on the finger tips and at the base of the nails, but only rarely on the toes and other parts of the body.

The stamping out of the present outbreak of this disease, which appears to be in a rather virulent form, will require a rigid quarantine of the infected region with all the loss and inconvenience that it entails, in addition to a large financial expenditure. However, this is the most economical method of dealing with this epizootic and everyone should render all assistance possible to the federal and state authorities in the arduous work which has been placed upon their shoulders.

Much maudlin sympathy has been sloughed off by many unwise folks over those afflicted with real or imaginary sorrow. Those folks need less sympathy and more inspiration. Thousands of people are natural "leaners," and if they can find anyone gifted in the art of exuding sympathy, they will hang around until they have had their fill.—Thomas Dreier.

NARCOTIC LEGISLATION

We were somewhat premature last month in announcing the passage by Congress of the Harrison Antinarcotic Bill. As we then stated, the differences between the House bill and the Senate bill have been adjusted by the conference committee of the two houses. The revised bill was accepted by the Senate, but, unfortunately, it was held up in the House of Representatives on account of the filibuster on cotton-relief legislation. However, we have the assurance that the measure will be passed immediately after Congress reconvenes in December. So far as we know, there is no opposition to the bill in its present form.

With national antinarcotic legislation provided for, the problem of state legislation against narcotic-drug abuses must be

considered. The necessity for such state legislation every doctor must appreciate. No doubt, the new federal law will be used as a model for the numerous bills which will appear in our legislatures during the coming winter. We hope that this may be so. Nothing could be more unfortunate than a multiplicity of regulations governing the sale, prescription, and dispensing of the drugs affected by laws of this character. Also, we want to see strong laws passed that will effectually put an end to the illicit use of habit-forming drugs.

In order to secure legislation designed to bring about the ends desired, without unnecessary embarrassment of the medical profession, it is of the utmost importance that the physicians of this country should take an active part in framing the new state laws. Remember that legislation of this kind is essentially medical in character. It will no doubt provide for the segregation and care of drug-habitues (as in the New York state law), as well as for regulation of the traffic in narcotic drugs. Therefore, in its enforcement—as well as in its molding—physicians should play a very important part.

There are many physicians in our state legislatures. We hope that these men will be foremost in the preparation and introduction of these bills, and that in framing them they will co-operate with the organized medical profession, so as to secure its best interests, as well as the interests of the whole people.

From a legislative point of view, we know of no matter of greater importance than this one. Take it up in your local medical society. Go into every detail with care. The pages of CLINICAL MEDICINE are open for its discussion.

PELLAGRA DEVELOPMENTS

Two more clinicians who devote special attention to pellagra, have reports of their work in *The Medical Council*, while there were two very interesting papers on the subject in last month's number of CLINICAL MEDICINE.

Doctor Niles of Atlanta, Ga., has published a book upon this disease. His results are encouraging. He prescribes alcohol, directs sunlight in summer, and radiant heat, and makes free use of proteids, buttermilk and vegetables, restricting the use of cereals.

As to drugs, he uses quite a number, meeting each indication with appropriate remedies. As specifics he employs iron arsenate and sodium cacodylate, sometimes substituting iron citrate and compound glycerophosphate for the iron arsenate, if the patient is anemic and quite nervous. He also gives potassium iodide and Fowler's solution, increasing the dosage until arsenical saturation is manifest.

For diarrhea he uses bismuth betanaphthol and resorcin, with tannigen and opium in reserve. On alternate days he administers kerosene enemas. If constipation presents he uses mild cathartics. The sore mouth is treated with thymol solutions or boroglycerin. Stomatitis and glossitis require silver nitrate.

Cutaneous lesions are treated with zinc oxide, boric acid, or calamine. The intense burning is relieved by applications of corrosive sublimate, phenol, or hot mustard water. Acetanilid or acetyl-salicylic acid mitigates the neuralgic pains. Hydrotherapy is useful.

The significant part of the treatment is the use of gastrointestinal antiseptics. This is emphasized by the report of Dr. Hardee of North Carolina, describing his treatment since 1908. He drops all else and pronounces salol a near specific for pellagra. Other remedies used are merely symptomatic. In the rare case in which stomatitis occurs, zinc sulphocarbolate is applied. His results are so good that Dr. Hardee considers pellagra as amenable to treatment as any other disease.

We have noted quite a number of reports in which the intestinal antiseptics were employed as adjuvants to specifics, the credit being given to the latter. Dr. Bowling, of South Carolina, has praised this class of remedies highly in papers published in CLINICAL MEDICINE, his favorite being chlorine water. Dr. Hardee places his reliance on one of the best remedies of this class, and he declares that he has never lost a case when his treatment was carried out.

Another significant fact noted by Doctor Blair, is that the early enthusiasm for arsenic in pellagra is dying out. The rapidly lengthening list of deaths following the use of salvarsan may have something to do with this; but the growing confidence in the antiseptics is probably the principal cause. Certainly it is a "desirable desideratum" that a dangerous remedy should be replaced by a safe one, if the latter proves as effective.

Two other remedies deserve mention during any discussion of pellagra—yes, three remedies. One of these is calcium sulphide, used with such gratifying success by Mizell and Pixley; another is quinine hydrobromide, praised by Isadore Dyer, of New Orleans, who in 100 cases treated with it had 100 per cent of recoveries; and the third is santonin, employed by Nason in all cases presenting intestinal worms, often a complicating element.

Also—diet is of the utmost importance. Pixley reduces the vegetable fats to a minimum and gives plenty of proteids, a practice which is supported by the experience of Goldberger of the United States Public Health Service. See an abstract of his article, printed elsewhere in this issue.

Pick up your task in the morning with eager hands, and in the evening it shall return to you a sweet calm. No work that comes to you to be done is too insignificant for you to do; whatever task is sent to you is meant that your hands should do it, for there are no other hands in the world that could do it half so well. Then take up your work with a glad heart; be gentle in your sayings, earnest in your doings and honest in your relations to all men and women. Inspiration shall come to you, and life will be altogether beautiful.—Ada M. Kassimer.

CULTIVATE OFFICE PRACTICE

We have just asked for suggestions from our readers for ways in which the doctor may better his condition and realize a little more of the economic benefits which ought to flow out of present-day efficiency in medicine.

It occurs to us that one way is to be found in the more and more assiduous cultivation of office practice. A certain amount of house to house practice is, of course, inevitable for the general practitioner; and house to house practice has its own peculiar values to the physician, chief of which is the solid place that it insures him in the regard and service of the family.

The specialist who does an exclusively office practice never enjoys the permanence and intimacy with his clientele that the family physician holds by reason of the entree which his house to house visits give him. That this permanence and intimacy is a valuable asset, even to the specialist, is evidenced by the tendency on the part of specialists nowadays to locate in residence centers, where they at least can establish something approaching to the family relation. The general practitioner cannot afford to neglect or belittle his advantage in this respect.

But, on the other hand, visiting-practice has one very pronounced disadvantage, from the economic standpoint, namely, that its financial status is more or less rigidly fixed. Custom has decreed that, no matter how trifling or how serious the case, how little or how much the physician may do during his visit, the charge shall be based upon a per-visit consideration, and shall be the same in every instance.

Nor is this quite the extent of the anomaly. For, the more capable the physician is, and the more efficacious his treatment, the less the number of visits that he is called upon to pay; and the less the number of visits he pays, the less the amount of the bill which custom permits him to render on this per-visit basis. Cutting down this syllogism to its first and last time, we find that the more capable and efficient the physician is, the less he gets for his service in house to house practice. Which is not very encouraging from the economic standpoint.

With office practice it is a little different—indeed, a great deal different. While it is true that custom and tradition have also fixed the charge for a routine office visit, and it is even to be admitted that this established office fee is less than the recognized fee for a house visit, yet, there is, especially in these latter days, every manner of elasticity accorded the physician in the way of wresting the office visit out of its routine character, such as is not permitted at all in the case of the house visit.

One can do a great many things in the way of treatment, to begin with, that one cannot very well do in the patient's home—stomach analyses, electrical tests, gynecological treatments, physiologic applications, minor surgery, and the like, all of which may be charged for, not on the cut and dried per-visit basis, but on the much more equitable *ad valorem* basis.

Again, the very same procedures which, carried out during a house visit, would be regarded as a routine part of the visit and expected to be included in the charge for the visit, when performed in the physician's office, would mutually be looked upon as special services, to be feed accordingly.

As a third consideration, one can see and deal with half a dozen patients in this special way in the office during the time that would be consumed in making one four- or

five-mile visit, with much less effort and much better returns. Other considerations naturally will occur to the thoughtful practitioner.

Office practice, therefore, seems to us to afford an excellent opportunity to exploit the advantages of modern medicine and to turn them to account. The physician who cultivates and encourages office work, while at the same time maintaining his visiting practice, will reap the double benefits of an expansive and elastic field of labor, supported by the solidity and permanence of his family relations with his clientele. He can, if he wishes, even develop some form of special work in his office, such as refraction or nose and throat surgery, or whatever most appeals to him, with which he can supplement his general practice, making the latter feed the former.

Another reason for cultivating office practice is, that it constitutes a provision against the inevitable approach of that time when the practitioner can no longer live the strenuous life; when he is obliged to leave to younger men the long, hard rides and the answer to the night 'phone. If, when this time arrives, he finds himself in possession of a well-built office practice, he can still remain in active and profitable performance of the work to which he has devoted his life and which every doctor has by this time come to love as he loves his life.

DON'T TAKE TOO MUCH FOR GRANTED

In a communication to *The Medical Record* on the subject of taking smears, Dr. Douglas H. Stewart takes occasion to critibise sharply the lack of elemental instruction and information which characterizes the monographs and text-books (and he might have added, the current medical journal articles) in the various subjects of which they treat.

"The writer of a monograph who takes too muc hfor granted," says Doctor Stewart, "might as well have lost his understanding, so far as conveying the fundamental, elemental facts of his subject to the reader; his book is full of holes; incomplete and still-born. Volumes have been written upon gynecological subjects for many centuries, yet the every-day theme of leucorrhea still leaves a hiatus between book and laboratory, as no mind not specially trained could properly carry out their simple but unexplained order to 'take a culture.' Personally, I know how to take smears, because I was first instructed by word of mouth, but exploration of eight books on gynecology, two on bacteriology, and two on microscopy, has failed to yield any information worthy of the name."

This is most timely criticism, to which we pronounce a devout Amen. There is no more healthy or promising sign of the times in medical practice than the eagerness with with which the general practitioner, even in the remotest corner of the rural districts, reaches out for the fruits of modern scientific research and mechanical ingenuity, and the alertness with which he avails himself of his advantages and responds to every advance movement; and there is no more disappointing and exasperating spectacle than the tantalization of these eager spirits and outstretched hands with fruit hung just out of their reach, treasures held just short of their grasp, for lack of a little considerate explanation of the elements of the subject discussed.

Many a practicing physician has a good theoretical acquaintance with, and a thorough appreciation of the value of the various diagnostic and therapeutic procedures which have come into vogue since the time of his graduation; but he is not making use of them because he has never had the opportunity of familiarizing himself with the necessary technic of their application, and, as Doctor Stewart points out, the text-books and monographs are all in a conspiracy of silence in this respect. Perhaps that is a little too harsh; possibly it would be more correct to say that they take too much for granted.

There are, to be sure, two or three books on the market devoted entirely to diagnostic and therapeutic technic, including that of every important measure used in medical practice up to the time of printing. But even this is not adequate to meet the situation, since there are many procedures which cannot be included in a text-book of limited size, and every day, almost, brings forth an innovation, or at least a modification, in technic.

What is needed is that the medical journals, which are, after all, the great educators in current medicine, shall give this practical, technical phase of medical practice more extensive and detailed treatment. We are too ready to assume a knowledge of technic in matters

which cannot possibly have come within the ken of the men in the field. The readiness with which they respond entitles them to the utmost consideration in this respect. This journal, for one, proposes to give even stricter heed to its duties in this direction in the future than it has in the past.

What do *you* want?

THE CHRISTMAS-SHIP AND THE CHRISTMAS SPIRIT

As I write these words, the Christmas-ship is making ready to start on its memorable voyage from New York to Europe. By the time my words are read by the CLINICAL MEDICINE "family," it will already be ploughing its way through the Atlantic Ocean. A unique and wonderful ship—the first ship that ever sailed under the official flag of the Christ Child, the Star of Bethlehem—carrying Christmas gifts from the children of happy, prosperous America to the children of war-stricken suffering Europe. It is the modern impersonation of the oldfashioned Yulelog (almost forgotten in our latter-day artificial Christmas celebrations), the kind that burned on the hearth of good King Wenceslaus when he "looked out, on the feast of Stephen." Round its weather-beaten hull and its blessed pennant will gather the widowed and orphaned, the hungry and the naked, the poor and the sorrowing, and kindly hands will distribute Christmas cheer, food and clothing, toys and playthings, comfort and blessing and joy.

I would give worlds to be the captain of that ship—or even the humblest among its crew. Think of the imperishable honor of sailing a vessel under the Star of Bethlehem. Not a flag on the sea but will reverently dip to it. Not an eye will be dry as it steams imperially into port and anchors at the quay. I think I could be content to sail such a ship and die. But, after all, the captain and the crew are but the privileged representatives of every boy and girl and every grown person that has helped to charter and load it. "Inasmuch as ye have done unto one of the least of these my brethren, ye have done it unto me."

But the Christmas-ship carries more than Yuletide gifts and Yuletide greetings to the suffering and needy. It is freighted with the heart of America. It conveys, as nothing else could, the real, unspoken message of the New to the Old World in this terrible crises. For, whatever their differing nationalities and creeds, whatever their name or sign, deep in their hearts the citizens of the New World are children of the new era. They have been born again. They have seen the new vision—the vision of a common humanity and of a golden age,

> When shall each man's good
> Be all men's aim, and universal peace
> Lie like a shaft of light athwart the sea.

This is the message that the Christmas-ship bears to Europe from the heart of America. Our neutrality is far, far deeper and larger than Europe dreams. It is far, far more than a national or international neutrality: it is a human neutrality which cannot be silent. Deep in our hearts, where we are neither Jew nor Greek nor Barbarian, but men of the new era, we are not so much concerned with the political or economical causes of the war, nor with the strategical phases of its conduct, as with its human side. We are appalled by the terrific loss of life and the pitiful wreckage of all that makes life worth living; we are profoundly moved by the spectacle of misery and suffering; above all, we are sorely troubled by the bitter and violent passions that are rending asunder the peoples of the belligerent nations and destroying the work of a half-century of peace and good will.

With the international situation we cannot, nor have we desire to, meddle. Toward it, we must, and will, maintain a passive neutrality. It is none of our business. But toward the human situation, our neutrality may, and shall, be active. We are so closely bound by human ties to *all* the peoples of Europe that we cannot stand aloof from their need and their distress, and our active sympathy and help can offend none of them.

To these human sentiments, we will never cease to appeal—not as a nation, but as men and women—with our reason and our prayers, as long as breath shall last. To this human distress we will never cease to minister while we have hands to labor. And this, with no pharisaical spirit of superiority, but with genuine, humble brotherliness—yet, not without the sincere hope that our fellowship and ministry may hasten the time when the demon of war shall be cast out and our brethren across the sea shall

again be clothed and in their right mind.

There is even a larger significance than this in the Christmas-ship, if our eyes may but see it. The star under which the ship is sailing is, in fact, the one bright star of hope in the whole dark sky. It signifies that, after all, even in the midst of wars and rumors of wars, the Prince of Peace is still supreme. *In hoc signo vinces!* The Christ-Child, after all, is the real ruler of the world—the ultimate power, with which mankind must reckon—and the Terrible Meek shall inherit the earth. "We have seen His star in the East and are come to worship Him." Isn't it strange, by the way, and a little significant, that in this twentieth century the star should come out of the West—that wise men from the West should carry the news of the nativity of the Prince of Peace back to the East?

Oh, yes, without doubt this is the highest, best message of the Christmas-ship. Now, more than ever, I would fain be one of its crew. Its regal pennant and its "Inasmuch" are not simply a message of Christmas cheer and Yuletide gifts to the widow and the orphan, not only the voice of America's full heart to stricken Europe; they are the pledge to all mankind that peace and love and brotherhood of man still shine in men's hearts, above the blackness and chaos of the primal passions.

"A hair, they say, divides the false and true;
Yes; and a single Alif were the clue,
Could you but find it, to the Treasure-house,
And peradventure to the Master, too."
—The Rubaiyat.

MILLENNIAL MUSINGS

Sometimes we indulge in musings, day dreams, in which we allow ourselves to imagine what a lovely world this would be if people only put into actual practice the things they know.

Ignorance is, surely, the unpardonable sin; yet, there are degrees of ignorance. We should define real knowledge as the realization of truth in one's daily life; that is, we know a thing so well that we live it.

Correspondents viewing the great European war from a safe distance at the rear speak of the marvelous perfection with which these gigantic modern instruments of destruction are organized. Every possible contingency has been thought of and provided for, even to putting double sets of suspender-buttons on the soldiers' trousers, so he may shift his galluses if they make one of his shoulders sore? And, have they provided for all his other wants as well? Have the northern hosts been guarded against the attractions of the Flemish maids as carefully as the Duke of Alva protected his Spanish infantry?

We have sometimes imagined that the day might come when the family physician would be the sanitary director of his clientele, and by his sagacious advice lead them along the paths that vert to Hygeia's temple; and, so, we should never be ill, but look on pain and disease and death as grim monsters of the fabulous age, contemporary with the dragons.

But, in the way of realizing this milennial vision stands an obstacle—the average human being doesn't want to live hygienically!

Once we published an account of a case of diabetes we had treated with some success. A distinguished retired army officer read it and as a consequence called upon us. We began to explain the regimen necessary, when he interrupted, to say: "I don't want any diet. I want you to give me a treatment that will allow me to eat anything I want, in any quantity!" We resigned.

Mr. Man doesn't want to stop drinking, or smoking, or working, or playing too much. What he wants of us is, the means to keep on as he has been living. Madam does not relish our advice to cut down her bridge parties, loosen her corsets, and quit gorging. She wants medicine to restore her youth, take off her fat, and enable her to keep it up until she has had enough.

They all come to us, not for reform, but to be enabled to go on sinning.

So far as sanitary living is concerned, and the inauguration of a millennium based thereon, we have concluded to postpone it until the curly head of sweet sixteen is as full of wisdom as is the snowy poll of sixty.

SOME BLADDER REMEDIES

There are four remedies that should be better known to the profession for their remarkable powers in certain pathologic conditions of the bladder.

Rhus tox is a wonder. It is essentially a woman's remedy, and specifically opposes atony o fthe vesical sphineter. Women suffer by no means rarely from leaky bladders.

There is a frequent stillicidium of urine that keeps their underclothing damp, and makes them, as one disgustedly exclaimed, "smell like a polecat." Every time they cough, sneeze, or make any movement involving a sudden strain, a gush of urine shoots out. The irritation of the urine induces intertrigo and pruritus. In this condition a mere fractional dose of rhus gives instant relief, and its steady use for a month or two often effects a cure. For some inexplicable reason, it has never proven equally satisfactory with men.

Just where rhus fails, delphinine succeeds. With men this leakiness is almost invariably associated with two other pathologic conditions, imperative impulse to urinate, and feebleness of the detrusor. The old man tells us he feels the call to urinate and can scarcely wait to get his clothing open, generally a shoot of urine soiling his clothes before he gets them out of the way. Then the urination waits, with peculiar sensations, for half a minute, perhaps, and then the stream dribbles between his feet, so slowly that in winter he is chilled before the operation is completed. Even when he thinks he is through, he finds a gush of urine soiling his garments.

A curious concomitant is that mental stress or labor, worry, or protracted mental labor, increases all this group of symptoms.

Under the use of delphinine, in minute doses, the function is frequently improved to the state it exhibited ten years previously. The bladder is better controlled, less immediate in its demands, better able to retain the urine, and the extrusion is more vigorous.

When either rhus or delphinine fails, in moderate dosage, we have cantharidin in reserve. It is emphatically a reserve, to be called upon only in dire necessity. It also is to be used only in very small doses—1-5000 grain, not more than seven times a day, and not more than a week, continuously, with two or three weeks' intervals during which milder remedies may be taken. Sodium cantharidate is perhaps the best form of this powerful agent. In too large doses it irritates the kidneys and bladder, exerting on the delicate tissues of the glomeruli and tubuli the same vesicant action as on the skin.

Sometimes there is slight leakage of albumin, without other signs of nephritis. If this occurs in weakly, relaxed, elderly patients, these small doses of sodium cantharidate will usually stop the loss of albumin and occasion an improvement of health that is almost marvelous. So, also, when there is a slight passive hematuria from any part of the genitourinary tract.

Whenever there is catarrh of the mucous membrane, and arbutin. Even without catarrh it is a useful and harmless tonic to the whole tract, from kidneys to meatus. It is hardl ynecessary to give more than a grain a day of this remedy although 4 grains may be taken with impunity. As with rhus, delphinine, and cartharidin, the best effects follo wthe minute doses—so minute that the homeopathist might claim them.

The effect of these remedies on the sexual function is doubtful. Most patients declare that no effect is manifested; and, in fact, weakness of this function is not necessarily or as a rule present with the group of symptoms above noted.

Who of our readers will give us the results of their own experience with bladder troubles and bladder medicines?

All service is the same with God—
With God, whose puppets, best and worst,
Are we, there is no last nor first.

—Browning

THE LUTE OF LIFE

I want to make a suggestion. If you have not bought a Christmas present for your wife, you can find nothing nicer to give her and nothing that, I am sure, she will enjoy more than a copy of the late Dr. James Newton Matthews' book of poems, entitled, "The Lute of Life."

Doctor Matthews' poems remind me of those of James Whitcomb Riley. Indeed, there are many good men—poets themselves—who think them even better, and I frankly confess that to me they appeal more than does the work of the great Hoosier. Perhaps it is because Matthews is a doctor and knew something about the doctor's life and wrote about it in a way that showed that understanding.

It is more than likely that many a doctor's wife will see this little note. If you do, my good madam, why not buy a copy of these poems for your husband for Christmas—unless you have already discerned symptoms that he is going to get a copy for you. We shall be very happy indeed, to fill all orders for these books, profits of which go to Mrs. Matthews, the doctor's widow.

Leading Articles

The Treatment of Croup

With a Discussion of Its Diagnosis

By V. E. Lawrence, M. D., Ottawa, Kansas

EDITORIAL NOTE.—We make no apology for reprinting this article, which was published in "The Alkaloidal Clinic" fourteen years ago. At that time it presented the claims of a new remedy—one which time and much clinical experience have shown to be of the greatest value, not only in croup but also in various other respiratory diseases. The article is, therefore, of historical value, quite apart from its exceeding helpfulness from a practical standpoint. One point we wish to emphasize—a point which Doctor Lawrence himself makes—that calx iodata is not offered as a cure for diphtheria. If there is a question as to the diagnosis, antitoxin should always be administered. As to the necessity for the use of that remedy there can be no equivocation, and, the diagnosis once made, there must be no delay. In every severe sore-throat, in every "croup," whether membranous or not, cultures should be taken and submitted to a competent laboratory man. If it is impossible to do this, then the physician's mistakes should be made on the side of safety—he should administer the antitoxin, then, without fail. With this statement Doctor Lawrence concurs.

THE article reproduced herewith first appeared in the September, 1900, issue of this journal. Several years ago I was asked by the editor to rewrite it for republication. As it was the result of a study of membranous croup and of diphtheria largely extending over the period following my graduation from the University of Michigan in 1883, and, since it covered a rather exhaustive survey of medical authorities upon the subject, I replied that the ten years intervening since its publication had done nothing more than to confirm the evidence there presented; and, furthermore, inasmuch as during the ten years before its appearance I had written numerous articles for the leading medical journals of the United States and of Canada regarding the dark iodide of lime, I rather hesitated to present the matter anew.

More recently, however, Doctor Burdick, managing editor of this journal, repeated the request; and, so, in appreciation of the benefits which I have derived from The Clinic, month after month, since the first number published, I will simply say to the reader that, so far as the article itself is concerned, I can not add to nor do I wish to retract from it as it originally appeared.

Many years have gone by—almost thirty—since my first fatal experience with membranous croup. It was in a case of consultation; and it was then as I beheld the agonizing death of the handsome 6-year-old boy, that I realized the awfulness of the disease and the almost helplessness of the doctor in trying to save his patient. It took two more such experiences, likewise in counsel, to fix attention on this disease, with its history, its treatment and its alarming mortality, indelibly in my mind. I began eagerly to search for, and with an almost abnormal relish absorbed everything I could lay my hands upon regarding diphtheritic croup and membranous croup. Then, eventually I became convinced that Sir Morrell Mackenzie made a most fatal mistake when he threw the weight of his great reputation upon the assertion that these two diseases were identical.

The appearance of my article in The Clinic precipitated editorial comments, for and against, in several of the large eastern medical journals, one of them being kind enough to say that the article was the best that lately had appeared upon the differential diagnosis of membranous croup and diphtheritic croup.

I do not claim to have been the first one to use the dark iodide of lime, but, so far as I know, I was the first writer to bring it before the profession. When he was a guest at my home, ten years ago, Doctor Waugh said that my articles upon this remedy for the first time had brought it to the attention of the profession and that he would make

an effort to have mention of it appear in the next edition of the United States Dispensatory. In this, I regret to say, Doctor Waugh failed to succeed. As a matter of fact, it is much to be regretted that so many of our textbooks are overconservative. Up to the present, after almost twenty-five years, during which period the medical journals have been speaking of this remedy in the highest praise, it is, so far as I know, mentioned only in the sixth edition of Shoemaker's "Therapeutics," and there only in reference to articles as presented by myself.

It was while practicing at Halstead, Kansas, that I first became aware of and first wrote regarding the dark iodide of lime, (calx iodata or calcidin, as it is now known) and I well remember saying to my wife that it was not often that a doctor residing in a small town had the opportunity of presenting to the medical profession an almost unknown drug as an almost infallible remedy for the cure of an almost uncurable disease; and added that, in payment for the vast storehouse of medical knowledge which I, in common with all other doctors, had inherited from our predecessors, I was determined to bring it to the attention of the world. My reward, indeed, has been in reading of the many lives saved through its use in the hands of other physicians.

In conclusion, I would once more emphasize the absolute necessity of bearing in mind that diphtheritic croup sometimes first attacks the trachea. In fact, since the first appearance of this article of mine, I have treated two cases in which it entirely confined itself to the trachea and did not attack the tonsils at all.

The rule to follow is, when the dark iodide of lime does not in a few hours produce beneficial results, to conclude that the case is one of diphtheritic croup and immediately to resort to antitoxin. In order however, to give the patient the benefit of the doubt, the administration of the dark iodide is continued.

My article, as it appeared in September of 1900, now follows *in extenso,* without quotation marks, with here and there perhaps some slight amendment in phraseology.

Probably there are few things in our professional life which make a deeper and more lasting impression upon our minds than the deathbed scenes of our first patients, and especially so if the objects of our solicitude chance to be beautiful little children struggling for life in the grasp of that so much dreaded destroyer of juvenile existence—membranous croup.

Doctor Eberle, in his "Diseases of Children" (published in 1841), in discussing membranous croup, says:

"In the long list of human diseases, there is none which presents a more painful scene of anguish and distress, or which excites more poignant feelings of sympathy in the heart of the physician, than the one now under consideration. I have witnessed the approach of death under a multitude of appalling forms, but in all the deathbed scenes which it has been my misfortune to witness I have never had my feelings so deeply affected as when looking upon a blooming child struggling under the ruthless grasp of this terrible disease."

My Unfortunate Early Experience With Croup

During the first years of my professional life, it was my lot to be several times called in counsel in cases of membranous croup. With one exception, these cases proved fatal, and the agonizing appeals to be seen in the eyes of these unfortunate little sufferers long after they were unable to articulate, and later the heartrending scenes accompanying their demise, overwhelmed me with sorrow and sent me home almost to a sick-bed.

The dreadful fatality of the disease, the agonizing symptoms and the futility of medical assistance made a most lasting impression upon my mind, and, without any especial determination upon the matter, I found myself almost instinctively turning my thoughts to a consideration of the disorder.

As the years went by, these cases fell into my hands, and my efforts to save them were accompanied with such long and trying scenes and such fatal results that I came to look upon the disease as the most to be dreaded in the long list of maladies peculiar to childhood. But while I lost my patients I still profited by experience.

My views of the cause of the disease and the line of treatment which gave the best results became more mature; and, after some years of study, observation and thought, I came to the conclusion that the views of the older authors, that the disease is a local inflammation accompanied by a fibrinous exudate (and in no sense a diphtheritic exudate), were correct.

In accordance with this theory, I began the use of alterative remedies; and, while I still lost cases, a larger percentage were

saved. I came to rely upon the muriate of ammonia [ammonium chloride] as the most efficient. Little by little I became convinced that, if a more active resolvent could be found, better results could be obtained.

So, next I began to use the iodide of calcium (or lime), a salt but little employed by the profession. This is of a slightly yellow color and readily soluble in water. I found this remedy a more active resolvent than ammonium muriate and by its use saved a still larger proportion of my patients. Still, I found that by itself the remedy was not sufficient and that it was necessary for me to remain with my patients during the night and resort to the use of slacked lime, and other expedients.

The next step forward was the employment of a remedy which up to the present is not mentioned in our Materia Medicas or even in the latest edition of the United States Dispensatory.

This remedy is the dark iodide of lime. It is of a dark color, is readily decomposed by the action of light, and doubtless is the most active alterative known to medicine.

It was about seven years ago that I first used this salt in the treatment of membranous croup, and since that time all difficulty in curing every case which has fallen into my hands has ceased; and I am fully of the opinion that nowhere in the domain of therapeutics have we a remedy more deserving of the name "specific."

During these seven years I have treated not less than 25 or 30 cases of this fatal disorder, without a single failure and without remaining at the bedside of my patient for a single hour. Under the use of the dark iodide of lime, the symptoms disappear and the patient moves forward to an easy and sure recovery. The dread which I formerly had of this malady has entirely disappeared and I take charge of these cases with as much assurance of recovery as though the little one were suffering only with measles.

Two Serious Obstacles to the Use of This Remedy

There are two obstacles which stand in the way of the profession's quickly accepting this sovereign remedy. The first has already been mentioned, namely, the fact that the works on therapeutics entirely fail to mention the salt; the nearest they come to it is in the description of the yellow iodide of lime (or calcium). Scarcely any of the wholesale drug-dealers carry this drug or know anything of it, and so, the physician endeavoring to obtain it at last becomes discouraged.

There is, however, a second, and a more serious, obstacle. I refer to the general belief among physicians and medical writers that membranous and diphtheritic croup are identical diseases.

There can be no doubt but that there are cases of diphtheritic croup which so closely resemble membranous croup that it is impossible to arrive at a definite diagnosis. I refer to those cases of diphtheria in which the exudate confines itself to the trachea and smaller tubes, and fails to appear upon the tonsils. But these cases are so rare that I have met with but one; and here the exudate appeared upon the tonsils about the fourth day. I mistook this for a case of membranous croup, treated it with the dark iodide of lime, and lost the patient, not being able to diagnose the diphtheritic character of the disease until the tonsils became involved, which was only a few hours before death.

Still, there are a few cases of diphtheria which fail early to attack the tonsils. The exudate of membranous croup, however, never appears upon the tonsils. Furthermore, the exudate of membranous croup is fibrous and as elastic as rubber, while that of diphtheria is cellular and not elastic.

It is highly important that no error in diagnosis be made if satisfactory results are to be obtained from the use of the dark iodide of lime; for, while this remedy is almost certain to cure any case of membranous croup in which it is resorted to within reasonable time, *it possesses no curative virtues in diphtheritic* croup.

I know I am attacking well-fortified ground when I assert that the diseases are not identical, and I am sure that the reader will be glad to hear any corroborative testimony I may be able to produce. And this I am all the more anxious to do, for the reason that as long as the physician adheres to the belief that membranous croup and diphtheritic croup are not distinct diseases he is not likely to call to his aid the assistance of this most valuable remedy I am advocating. Let us see.

Some Corroborative Testimony

Dr. Geo. W. Gray, in an article written for the "Reference Handbook of the Medical Sciences," volume II, page 340, writes:

"The profession has always been, and still is, divided upon the question of the identity of these two varieties [of croup], one portion claiming that the primary is purely local and the secondary a constitutional affection; while another portion, with equal confidence, asserts that they are one and the same disease with different manifestations.

"Much of the confusion that exists upon the subject is due to the fact that authorities are not agreed as to what group of symptoms shall constitute either malady. Typical cases of the two varieties of croup under consideration are distinct enough, but in localities infected with diphtheria the clinical history and the anatomical appearances shade into each other so gradually that it is not always easy to determine to which class a given case belongs, especially in the early stages, the time when it is most desirable to make an exact diagnosis.

"Dyspnea, the most prominent and important symptom, is common to both varieties of the disease. Glandular enlargements, nasal discharges, albuminuria, and paralysis are the distinguishing features of diphtheria. Fatal cases of diphtheria in which the larynx is not involved are common. Primary croup, on the contrary, is usually a laryngeal affection from the first and causes death from suffocation. In short, the latter is simply croup, and nothing else; while diphtheria, while occasionally complicated with croup, is something more.

"Many of the older members of the profession who had opportunities for studying croup when and where diphtheria was unknown and did not exist, and whose opinions are entitled to great respect, recognized the clinical difference between the two affections. They did not look upon croup in those days as being contagious, nor did they observe any of those constitutional symptoms so prominent in diphtheria and so characteristic of septicemia.

"There is an acute, noncontagious and noninfectious disease of the larynx, local in its nature, confined to the upper air-passages, not epidemic, characterized by the formation of false membrane—which causes the principal symptom, dyspnea, and very often destroys life. This is primary croup, and at the present time it is of comparatively rare occurrence.

"Second, there is an acute, contagious, infectious, and often epidemic affection, presenting a membranous deposit in the fauces, larynx, and other localities, accompanied by symptoms of blood poisoning, such as enlarged glands, nasal discharge, albuminuria, paralysis, debility, and coma. This is diphtheritic, or secondary, croup. For more than a quarter of a century it has been the prevailing variety of the affection, and, like the preceding variety, it is very fatal."

Henoch, in his "Diseases of Children" (p. 140), says:

"My opinion, that croup is the highest development of acute laryngitis, is opposed to that of many authors, who regard it as always diphtheritic. I will acknowledge that croup has become more frequent since the epidemic and endemic spread of diphtheria, but I see herein no reason to deny every other mode of development. I knew from experiments that croup can be produced in rabbits and dogs by the application of caustics to the tracheal mucous membrane and the inspiration of hot vapor of water."

Ellis, in "Diseases of Children," likewise supports the contention, as follows:

"Similarity of cases here and there does not remove the great broad line which, looking to the totality of the symptoms, appears to me to run plainly enough between the two. In diphtheria, the exudation is formed upon the tonsils and pharynx and spreads thence upward and downward. Whereas, in croup, I recognize a disease sporadic and doubtfully, if at all, contagious; of a rather sthenic character at first, in which not the tonsils and pharynx but the larynx and trachea are the parts first attacked."

Parallel Symptomatology

The following is a clipping from a medical journal, the author of which I cannot now recall. It corresponds with my own observations:

Membranous Croup	*Laryngeal Diphtheria*
Is due to exposure to cold.	Due to a specific poison.
No period of incubation.	Period of incubation 1 to 5 days.
Is a local disease, consisting of an inflammation of the mucous membrane of the larynx, with exudation of false membranes.	Is a constitutional disease, where bacteria are deposited and form false membranes on the mucous membrane of the larynx.
The false membranes, beginning in the larynx, may extend from there to the pharynx.	The false membranes exist at the beginning of the disease in the pharynx, and extend from there down to the larynx, and frequently up into the nose.
Affects children only.	Attacks adults also.
Begins most suddenly at midnight, with croupy cough, etc.	The child has been ailing 3 to 5 days before croupy symptoms appear.
The child loses its strength only after frequent vomiting and toward the close of the disease.	The child becomes weak from the very beginning, and loses strength rapidly, even before appearance of croupy symptoms.

Never any constitutional symptoms, except high fever symptomatic of the violent larynx inflammation) and near death—symptoms due to want of oxygen.	Constitutional symptoms from the very beginning, moderate fever long before laryngeal symptoms, and the child often dies from septicemia before death by suffocation sets in.
Never any complications.	Often nasal diphtheria, sometimes endocarditis, always septicemia.
Albumin in the urine only after dyspnea has become great.	Albumin in the urine from the very beginning of graver symptoms.
Never enlargement of glands.	Enlargement of glands from very beginning, and never absent.
*Never contagious.	Very contagious.
*Never followed by any sequelæ.	Frequently followed by local and general paralysis
*Rapid convalescence.	Very slow and tedious convalescence.
False membranes soluble in potash solution, hardening in sulphuric acid.	False membranes soluble in sulphuric acid, hardening in potash solution.
Membranes consisting of new formations of cells.	Membranes consisting of masses of bacteria and cells.

"These differences are not the result of artificial work, but they appear in every case of either disease, and are taken from nature; and I hope that I have convinced you that membranous croup and laryngeal diphtheria are by no means identical, but totally different diseases, distinct from each other. And let me impress upon you once more the fact that, while the former is a local, the latter is a constitutional, infectious, contagious disease."

It seems to me that the diagnostic points, as above enumerated, are sufficiently distinct to enable the physician in all but the rare cases, already described, to distinguish between them.

Nature and Mode of Use of the Compound

We will draw this article to a close by giving a short history of the remedy so efficient in curing membranous croup, and in doing so will quote from a monograph now before us. "The iodide of lime is a chemical compound discovered by Dr. James R. Nichols, of Boston, in 1855. It is a preparation entirely distinct from the iodide of calcium of commerce. The latter is a stable salt of calcium and iodine, of light color, and of very little, if any, therapeutic value. Iodide of lime, on the other hand, is an unstable combination of these elements, of a dark-brown color, with *a large molecular excess of iodine.*

"This supersaturation of iodine is the essential feature of iodide of lime, and can only be secured by its special process of manufacture.

"As above stated, the iodide of lime is an unstable preparation of lime, supersaturated with iodine. The chemical combination is a very feeble one and the compound breaks up into its component parts immediately on coming into contact with acids. When the iodide of lime is taken into the system it decomposes on meeting with the acids of the digestive fluids and thereby sets free the iodine just where it is wanted and can be most easily absorbed. In this particular feature of its action lies the superiority of iodide of lime over the many other preparations of iodine."

This salt is said also to have the power to cause absorption of fibroid tumors of the uterus, quickly diminishing the troublesome hemorrhage and finally causing the growth to disappear.

In using the remedy, I add 10 or 15 grains of the drug to 4 ounces of water. Of this mixture I order from one to two teaspoonfuls every thirty minutes until the patient feels better, then less frequently.

It is not necessary to stir up the deposit of white lime which will fall to the bottom of the cup, because the iodine, which is the active principle, is in solution and the lime is worthless. The remedy should be protected from the light, as it quickly decomposes. The iodide of lime is not poisonous.

Should an emetic be needed, I prefer about 3 grains of turpeth mineral, repeated every one-half hour until it acts.

The use of dark iodide of lime will certainly revolutionize the treatment of membranous croup, and wherever its virtues are known the dreadful mortality of this disease will disappear.

The Philadelphia *Medical World* says editorially:

"The dark iodide of lime is a specific in membranous croup."

A medical writer in *The Charlotte Medical Journal* says:

"I believe the remedy is the most reliable ever used in membranous croup."

Dr. A. G. Beebe writes that, with its use, there is no reason why any case of the malady should fail to make a good recovery. He has used it in many cases, without a single failure.

Dr. L. S. McMurtry, of Louisville, says: "I find it to be an alterative of exceptional value, readily borne by the stomach and yielding prompt and positive results."

Dr. Wm. F. Waugh, of Chicago, author of "The Treatment of the Sick," writes me that the remedy will be given a prominent place in the next edition of his book.

*The conditions marked with an asterisk can not serve of course, for diagnostic purposes.—Ed.

The Diagnosis of Gastric Diseases

Some Points for the General Practitioner

By Boardman Reed, M. D., Alhambra, California

Author of "Diseases of the Stomach and Intestines"

WITH increasing frequency, physicians are complaining to the editors of medical journals that, in spite of the numerous technical articles contributed by learned gastrologists, the everyday general practitioners are not being told how safely and successfully to treat the ordinary cases of indigestion occurring in the great majority of patients who cannot or will not pay the fee of a specialist. When such a doctor tries to fortify himself by studying the text-books on the subject, he finds that, as a preliminary, they insist that a chemical and microscopical examination of the stomach contents shall be made after a test meal, so that the quantity of hydrochloric acid and pepsin may be determined. Then, when these are deficient, these agents are to be prescribed; or an alkali is to be administered instead for the more serious cases where there is an excess of hydrochloric acid, thus suggesting the possible presence of ulcer threatening either in the stomach or the duodenum. This gives good grounds for complaint.

Nine-tenths of the men in general practice today, even though graduates of leading medical colleges, have never seen a chemical analysis of stomach contents made. Few of them have been able to attend postgraduate courses or have provided themselves with the necessary equipment for making such examinations. In consequence, the large army of dyspeptics unable or unwilling to pay consultation fees must take pot luck, and go on suffering when the doctor's guess happens to be wrong.

The Writer's Own Experience

In my own early experience in Atlantic City, with a host of wealthy finical patients who lived high at hotels and were virtually all suffering from more or less chronic indigestion due to overeating and little or no exercise, and, yet mostly unwilling to reform their diet or submit to lavage or to any examination involving the passage of a stomach-tube, the need of less disturbing methods of examination soon became apparent, at least in the less urgent cases.

Fortunately there was a dull time during the early winter, the off-season, when postgraduate study at the medical centers was practicable. Convinced that simpler methods might be discovered or devised for the study of the gastrointestinal tract and its diseases, which concern directly or indirectly probably two-thirds of all the chronic affections in this country, I for some years spent a large part of my winters in New York, Chicago, Berlin, and Vienna in the investigation of this class of troubles. In Ewald's clinic especially, in Berlin, where there was always a superabundance of material to be studied, much experimentation was done to find simpler methods of examination for determining the essential points in diagnosis without too great a dependence upon painful or otherwise objectionable instrumentation.

Especial attention was devoted to external methods of ascertaining the boundaries of the abdominal organs, so as to learn at least approximately their size and position and the motility of the stomach and colon, in the numerous hypersensitive or overfussy patients who will not tolerate the use of the stomach-tube. Later, an article by Dr. A. L. Benedict, of Buffalo, gave me a valuable hint as to an easy external way of deciding whether there is an excess or deficiency of the gastric juice, by giving a teaspoonful of sodium bicarbonate and then auscultating to learn the amount of effervesence produced.

When, more than ten years ago, in lecturing on gastrointestinal subjects at the Temple University, Philadelphia (one of the newer medical institutions, which, however, was even then more up to date in that respect than many of the older ones), I emphasized the practical simpler methods, and later, in my book on these subjects, gave a fuller exposition of them than was to be found in other similar works.

The most frequent as well as the most serious mistake that is made, in the absence

of accurate knowledge as to the condition of the stomach, is, the assumption that indigestion means a deficiency of the gastric juice. The usual resulting prescribing of pepsin, if given alone, generally is useless; when given combined with hydrochloric acid, it often helps when there happens to be a lack of the normal secretion; but this is not a very common condition, or at least not the most common, but the combination is pretty sure to do harm when, as in the majority of cases among well-to-do people, who usually eat too much, there is a normal or excessive quantity of gastric juice already being secreted.

The danger here is in the fact that hydrochloric acid is the most powerful stimulant of the gastric glands and tends to increase markedly the secretion of that acid, with the decided imminent risk of a peptic ulcer, near the pylorus, on either the stomach or duodenal side of the boundary. And it is now a thoroughly established fact that in a large proportion of cases a neglected ulcer later becomes the seat of cancerous degeneration.

A still larger number of careless prescribers and most of the people who doctor themselves or let the druggist decide, depend, for any form of indigestion, upon some of the advertised remedies which are lavishly furnished by the makers to the doctors for distribution to their patients. And these remedies almost always are unscientific and nearly inert combinations of mutually antagonistic drugs, such as pepsin or papaya and one of the pancreatic preparations, which, to the extent of its activity, neutralizes the former; and, lest it fail to do so, some of these mixtures include a little soda, still further to destroy the effect of the pepsin.

Now, of course, a thoroughly expert examination of a sample of the stomach contents, as well as of a stool after a test meal, is very desirable in every case of stubborn indigestion; but, when for any reason it is not practicable, the doctor should know how to do the next-best thing.

He is generally fairly well trained in percussion and could always acquire a large fund of useful information by proceeding as follows:

How the Average Practitioner Can Test the Stomach

Let the doctor direct his patient to take nothing after the evening meal, which should be light and eaten not later than 7:30 p. m., and then on coming the next morning, take the usual test breakfast—(2 ounces of stale bread and 1 1-2 tumblers of water)—with no other food, drink or medicine till after this has been tested one hour later. The stomach should be empty when the test is made and the food eaten the day before be all out, as it normally is after the night's rest. But sometimes there may be abnormal retention from dilatation of the stomach, from marked atony or from obstruction at the pylorus.

If there should be any noteworthy retention, that is, more than a few spoonfuls of fluid retained, it would usually be revealed by the splashing sound produced by tapping gently over the abdomen. The locality of the splash and its extent thereupon would indicate roughly any enlargement or displacement of the organ. Much splashing would show a marked weakness of the stomach-muscle, its motility, and would be present practically always when there is a marked displacement or enlargement.

To Ascertain the Presence or Absence of Hydrochloric Acid

One hour after the patient has taken the test breakfast, give him a level teaspoonful of sodium bicarbonate dissolved in a tumblerful of plain water (not ice water), and let him lie down on a couch or table, with the abdomen completely uncovered. Then, after massaging the parts for two or three minutes, a decided effervescence, in case the normal hydrochloric should be present, would be discoverable by auscultation (as Doctor Benedict recommends) or be more strikingly shown by percussion when compared with the percussion note obtained before the soda was given.

If there should not be any increase of the tympany nor any bubbling discernible through the stethoscope, it would be positive proof that there was no free acid of any kind in the stomach, either free hydrochloric acid or any organic acid; though it is well in such case to give in addition 7 or 8 drops of strong hydrochloric acid dissolved in another tumblerful of water afterward, when the increased tympany and bubbling then produced would be confirmatory. When the increased tympany or bubbling following the ingestion of the soda solution alone is very pronounced, it will evidence the presence in the stomach of a correspondingly large amount of free acid

with often a resulting obstruction from spasm of the pylorus, and this acid in the absence of signs of much fermentation (such as an excessive amount of gas, with a heavily furred tongue and usually a lack of appetite) could safely be assumed to be hydrochloric.

If these signs of fermentation should not be very marked, there might be some question as to the character of the excessive acid thus proved to be present, since it might be lactic or other organic acid; and before basing any very active treatment upon the finding it might be wise to have the chemical test made.

The opposite result, however—finding an absence of acid—could be surely relied on as proving a decided deficiency of the normal secretion, so that the case would be clearly one for tonic restorative treatment, with at least small tentative doses of hydrochloric acid, combined best with a good glycerole of pepsin or some active preparation of papaya (such as papayotin), and often the addition of a bitter.

To avoid the danger of converting the hypochlorhydria into hyperchlorhydria or a possible ulcer, frequent repetitions of this simple test could be made before increasing the dose of the acid or continuing even the small dose too long; though cases occur in which cancer or an old chronic gastritis has destroyed the gastric glands entirely, leaving the condition classed by Einhorn as achylia gastrica. In this condition, the digestive aids may need to be persisted in indefinitely, or so long at least as they prove effective.

In giving an alkali to neutralize hyperacidity, the dose will need to be large. Less than 20 or 30 grains of soda or magnesia may fail and even aggravate the condition, as has often occurred in my experience, increasing the excessive secretion of the acid. This indisputable fact, and the success of very minute doses of tuberculin and the sera, may seem to lend support to the Homeopathic theory; and I proved by a paper in *The London Practitioner* more than twenty-six years ago that all active drugs have a two-fold action, according to the dosage.

"A PRETTY GOOD WORLD"

This world's a pretty good sort of world,
  Taking it altogether,
In spite of the grief and sorrow we meet,
  In spite of the gloomy weather.
There are friends to love and hopes to cheer
  And plenty of compensation
For every ache for those who make
  The best of the situation.

There are quiet nooks for lovers of books,
  With Nature in happy union;
There are cool retreats from the noontide heats,
  Where souls may have sweet communion;
And if there's a spot where the sun shines not
  There's always a lamp to light it,
And if there's a wrong we know ere long,
  That Heaven above will right it.

So it's not for us to make a fuss
  Because of life's sad mischances,
Nor to wear ourselves out to bring about
  A change in our circumstances.
For this world's a pretty good sort of world,
  And He to whom we are debtor
Appoints our place, and supplies the grace
  To help us make it better.

Acute Prostatitis and Its Treatment

By William J. Robinson, M. D., New York City
Editor of the "Critic and Guide," and "The American Journal of Urology;" author of "Never-Told Tales," "Sexual Impotence," and other works

ACUTE prostatitis is, unfortunately, a rather frequent complication of gonorrhea. There is a great difference in the opinions of venereologists as to its frequency, some putting it as low as 3 percent, others as high as 92 percent. This apparently absurd difference is really more apparent than real, some applying the term prostatitis to the mildest inflammation of the prostate gland, even of a catarrhal, transient character, others applying the term only to suppurative prostatitis and prostatic abscess.

If we apply the term prostatitis to every mild congestion or inflammation of the prostate gland, then we might consider it a natural accompaniment of every case of posterior urethritis. If, however, we apply the term only to those cases in which there appear decided subjective symptoms, with an accompanying unmistakable enlargement of the prostate gland, then I should say that the frequency is about 20 percent.

I consider it absurd, however, to apply the term acute prostatitis only to those cases in which the prostate gland is severely suppurating, or to consider acute prostatitis synonymous with prostatic abscess as some do. Even when a prostate gland secretes pus in profusion, that does not indicate a prostatic abscess. When the urethra secretes pus profusely, we use the term urethritis, and not urethral abscess. As long as the ducts of the prostate gland are open, so that the pus finds its way readily into the urethra, we have no right to speak of prostatic abscess. It is only when the prostatic ducts become clogged, so that the pus accumulates in the prostate gland, and there is, perhaps, destruction of tissue, that we have a right to speak of prostatic abscess.

Prostatitis a Serious Complication

I said at the beginning that prostatitis is, unfortunately, a rather frequent complication of gonorrhea. Of course, every complication is unfortunate, but prostatitis is particularly so, because it is that complication which makes chronic gonorrhea one of the most obstinate, sometimes one of the most maddening conditions to treat. Any gonorrhea in which the prostate gland is not involved is comparatively readily curable; for, applications to the urethral canal are readily made, and by the modern methods of dilatation-irrigation and by massage, aided perhaps by vacuum treatment, we can lure the gonococci from their hiding-places and destroy them.

But, once the gonococci penetrate the prostate gland, then we have an entirely different condition to deal with. We cannot apply medication directly to and into the prostate gland, by no method of massage can we be sure to express every little subdivision and duct of the prostate gland; and I am sure that it was the infection of the prostate gland that made Ricord say that we knew when a man got gonorrhea, but only the Lord knew when it would be over.

Besides the much more hidden and labyrinthine recesses which the prostate gland presents to the germs, the latter seem to find a richer soil in it than they do in the urethra and the urethral glands, and for this reason it becomes so hard to dislodge them. All those long-dormant cases in which the man was free from any symptoms for years, a gonorrheal attack suddenly coming on after drinking or sexual intercourse, are cases of prostatic infection. The prostate gland is the germ's best hiding-place; and, just as epididymitis is the most important complication so far as the race is concerned, so prostatitis is the most important complication so far as the wife is concerned; for, infection of the wife usually results, not from an uncured urethritis, but from an uncured prostatitis.

Symptoms of Prostatitis

The advent of acute prostatitis may be very gradual, so that the patient has virtually no subjective symptoms, or perhaps only an aggravation of the symptom caused by his posterior urethritis. He may feel greater discomfort in the perineum, a sense of weight and dragging down, difficulty in sitting, an inclination to walk with spread legs, etcetera. Or, the attack may come on very violently. He will feel a ter-

rible weight and heat in the rectum, become feverish, and, perhaps, have a chill.

In a severe acute prostatitis, the temperature may go up to as high as 103 or 104 degrees F. The patient is constipated, and when his bowels move the pain may be excruciating. The urethral discharge, if it was present before, frequently stops entirely, though this does not happen so frequently as with epididymitis. Mere touching of the perineum is painful, while the pain caused by inserting the finger into the rectum and touching the prostate gland is unbearable.

The prostate gland feels hot, throbbing, hard, tense, and fills out the entire rectal cavity, sometimes to such an extent that defecation is not only painful, but impossible in some instances. By sweeping the finger around the prostate gland, you have exactly the same sensation as in examining the vagina during labor when the child is at the outlet of the pelvis.

Besides difficult defecation, pain on urination or partial and sometimes complete retention of urine, the pain is severe, not only upon pressure, but is spontaneous, and the patient asks for relief, which in some instances can be afforded only by morphine. The pain, instead of being located in the perineum and rectum, may also radiate to the small of the back, to the glands, penis, testicles, and thighs. Instead of being uniformly enlarged, only one-half of the prostate gland may be swollen, the other half being almost normal.

After lasting for several days in about the same condition, prostatitis may pursue one of three courses: (1) it may end in complete resolution; (2) it may end in an abscess; (3) it may pass gradually into chronic prostatitis. Neither the first nor the second termination is very common; the most common one is the third one.

Treatment of Acute Prostatitis

Put the patient to bed. As a rule we find him there, but if we do not we should make him go there. Local treatment of the urethra should be stopped, although this is not so imperative as it is in epididymitis. However, the internal treatment, on the contrary, should be continued. Unless the patient is so sick that his stomach cannot stand anything, the santal-oil preparations should be continued. They diminish the dysuria, render the urine bland, and have, apparently, a beneficial effect upon the prostatitis itself.

Magnesium sulphate, in 1-dram to 2-dram doses four times a day, should be given regularly. This prevents constipation, and has a beneficial effect on the fever and the toxemia. If the fever runs above 101 or 102 degrees and there is severe headache, I invariably give some of the synthetic antipyretics, such as aspirin, phenacetin, antipyrin or pyramidon. These not only have a symptomatic effect in reducing the fever, relieving the headache and making the patient feel altogether more comfortable, but they also diminish the pain in the prostate gland and materially shorten the course of the disease.

In severe cases of prostatitis, we can but ill get along without any antipyretics. If the pain in the prostate gland is so severe that the patient is unable to sleep, restlessly tossing about day and night, we are forced occasionally to give a hypodermic of morphine; although I prefer to give the morphine in the form of suppositories of the following composition:

Morphinae sulphatis	gr. 1-3
Extracti belladonae	gr. 1-3
Olei theobromae	grs. 20

Less than 1-3 of a grain of morphine has no effect in a real case of acute prostatitis demanding an anodyne.

Leeches to the perineum are favored by many physicians, and they frequently afford immediate relief. I believe, however, that we can get along without them. Ice to the perineum is comforting and not injurious. When it comes to rectal douches, however, I prefer hot water to cold. The resolution seems to be brought about more rapidly by the use of heat than by the use of cold. It is true that when a prostatitis is to terminate in an abscess the hot-water enemas or applications by means of the psychrophore often will hasten this; but this is no misfortune, for, if an abscess is to take place and to break, the sooner this occurs the better.

The hot water to the prostate gland may be applied as an ordinary enema, about 6 ounces, containing 10 drops of laudanum and 10 grains of antipyrin, being injected and retained for about ten minutes; or it may be applied by means of the rectal psychrophore, hot water being circulated for about ten minutes.

Suppositories of mercurial ointment and ichthyol have often been recommended and used, and I have made use of them many times myself; still they irritate the rectum badly, sometimes very badly, and the bene-

fit derived from their use seems to be too small to outweigh the damage. I have, therefore, given them up altogether, and the only suppository that I use in acute prostatitis is the following:

Iodoformi.....grs. ij
Antypyrini.....grs. v
Morphiae sulphatis.....gr. 1-4
Label: Insert one three times a day.

The morphine, of course, has a tendency to constipate, but this is overcome by the magnesium sulphate which is administered through the course of the disease.

Some of our German colleagues advise starting with massage as soon as the hyperacute symptoms have subsided. I am opposed to it in any stage of acute prostatitis, as it may produce an exacerbation of the trouble or may set up an epididymitis. Massage of the prostate gland is distinctly a measure reserved for chronic conditions of the gland. Of course, if there are boggy, fluctuating places in the prostate gland which on gentle pressure yield a discharge of pus into the urethra, such expression may be performed; but this is really a different procedure from what we ordinarily understand by massage. If by gently pressing the prostate gland we are able to express pus into the urethral canal, we should do it twice or three times a day, following this procedure by a very gentle irrigation with a 1:4000 potassium-permanganate or a 1:1000 silver-nitrate solution.

Prostatic Abscess

If prostatitis is to terminate in an abscess, all the symptoms we have described become aggravated. There is a great elevation of temperature, although some prostatic abscesses without fever have been described. There is a great increase in the heat, pain, and throbbing of the prostate gland. There is excruciating dysuria, headache, thirst, dry throat, and there may be complete retention of urine.

The prostatic abscess may break into the urethra or into the rectum, or into the perineum. Sometimes it breaks in both directions, into the urethra and the rectum or perineum, thus forming a urethral or urethrorectal fistula. When the abscess breaks spontaneously into the urethra, there is a great gush of pus, generally mixed with blood, and this happy event is followed by almost immediate diminution of all the symptoms.

If the abscess does not break within a day or two and the fever goes up high, the best thing to do is, to incise the prostate gland through the perineum. But, if the prostate points into the rectum and there is a distinct fluctuating mass felt by the finger, then it is best for the physician to incise the prostate gland through the rectum.

The rectum may be irrigated with an antiseptic or a simple saline solution until it is absolutely free from any fecal matter, then a bistoury is plunged directly into the fluctuating mass, and the prostate gland is expressed as much as possible. The healing is less troublesome than when the incision is made through the perineum, and this method will be the one which the general practitioner will choose.

As we said before, an acute prostatitis may end in two or three weeks in complete resolution, so that there is, apparently, no sign left of the inflammation. As a rule, however, the symptoms subside gradually and the acute prostatitis passes over into subacute or chronic prostitis, the discussion of which will be taken up in another paper.

THE GHOSTS

The ghosts of my youth are haunting my autumn—
The sighing wind and the sobbing rain;
I hear them come in the dusk, and mutter,
Searching the land for their loves again—
For the pale new rose and the green vine twining,
For the beautiful grass and the singing grain;
Out of the gray of the day they wander
Over the land for their loves again.

The ghosts of my youth are haunting my heart—
The simple trust and the dreams long slain;
I feel them come in the wind and the water,
Searching my heart for their boy again—
For the wondering child with the eyes of laughter,
For the glorious joy of untouched pain;
Out of the dusk and the rain they wander,
Searching my heart for their boy again.

Harper's Magazine.

Dementia Præcox

A Plea for Therapeutic Research

By Bayard Holmes, M. D., Chicago, Illinois

EDITORIAL NOTE.—No man has recently aroused more interest in the study of dementia præcox than Doctor Holmes. He has pointed out the diagnostic value of the Abderhalden reaction, and he has brought to America Lundvall's nuclein and arsenic treatment. He has an intense personal interest in the solution of the problem of cure, which does not seem to him to be a forlorn hope. In view of the importance of the subject, it is to be hoped that this paper will be carefully read by thousands of physicians.

THERE is no disease, not even general paresis, that finds the patient and the medical profession in so helpless, hopeless and pitiable a condition as dementia præcox does. There is no disease that costs the state a larger amount in care and custody than this disease. The annual expenditure for it alone is one-fourth the state budget in some of our states. It is a condition for which there is little or no hope of recovery, and for which there are at the present time meager efforts at cure.

General Remarks

I should like to present a matter which has occupied my attention and best efforts at study and analysis for a considerable time. I must beg a careful reading of the subject, and some patience, if I present the matter in a very rudimentary and schoolmaster-like manner.

Recovery from any infectious process is the result of an activity on the part of the tissues of the body. It is frequently followed by immunity. Sometimes this effort is followed by an increased susceptibility.

Immunity seems to be a result of a defensive ferment reaction on the part of the organism, as demonstrated by the work of Emil Fischer and his worthy assistant, Emil Abderhalden. This reaction is brought about in some manner by the tissues of the body and by the blood in their efforts so to modify the albumin of the infectious process as to promote its excretion. Among other changes in the blood, which have been made the basis of tests such as the Widal reaction for typhoid fever, the Wasserman reaction in syphilis, the Freund-Kaminer precipitin reaction in tumors, and other less familiar methods, a catabolizing ferment is produced which acts upon the molecules of the toxic albumin, to wreck them and produce excretable molecules of peptone, polypeptone, and amino acids. Albumin molecules themselves are colloid and cannot escape from the circulation until they are so broken up as to form soluble peptones and amino acids.

Each albumin, toxic or not, is molecularly individual and unlike any other albumin molecule, whether in the human body or not. This individuality is dependent upon the relation toward one another of the various atoms of which the molecule is composed, just as the individuality of a house depends upon the relation of the brick, the boards, the window-frames, the doors, and the rafters. Out of the same material any number of quite different houses can be constructed.

Albumins Numerous, and Each Has Its Key

The formula of albumin ordinarily is written thus, $C_{720}H_{1134}N_{218}S_5O_{248}$, and its molecular weight is given as anywhere from 15,000 to 16,750. It is at once obvious to anyone at all familiar with the philosophy of combinations that so many elements give abundant room for an almost infinite number of distinct and separate albumins, differing from each other in structure, in form, and presumably in function. Even with only 20 atoms the possible combinations, as shown by Abderhalden, require for their expression 19 digits, namely, 2,432,902,008,176,640,000.

When any albumin enters the body, either as the material of disease or as the result of an experimental injection into the subcutaneous tissue or one of the body cavities, a ferment is aroused in that body which is perfectly adapted to breaking down, wrecking or catabolizing the albumin which was injected—and that albumin alone. This relation is aptly illustrated by the relation between the Yale lock and its key.

All Yale locks are much alike in general form and structure, just as all albumins are much alike. But they are each essentially different from every other Yale lock. So it is with the keys. Every Yale-lock

key looks much like every other Yale-lock key, and yet, each key unlocks its own lock, and no other.

Exactly in this manner each ferment wrecks or breaks down its own albumin molecule, and no other. If two distinct albumins—for example, the albumin of human liver and the albumin of hog's liver—are injected into an animal at the same time, two ferments will be produced in the body, the one to wreck the human albumin, so that it can be excreted, the other, to wreck the hog's-liver albumin, so that it also can be excreted.

The Protective Function of the Ferments

In another respect, also, the ferment resembles the key of a Yale lock, in that the key is not used up by the process of unlocking and it is perfectly good for the unlocking of any number of identical locks. So is the ferment adapted to breaking down or catabolizing any number of identical albumin molecules, without any loss of energy to itself, and apparently without any change.

This protective catabolizing process is necessary to the excretion of the toxic albumin, and it must have been one of the organism's primeval functions. It began, no doubt, in the lowest forms of cellular life, when the ameba took into its body, for example, the albumin of the diatome; the albumin of the diatome was colloid, foreign and unassimilable. It was necessary first to break it down into the nutrient and perfectly assimilable amino acids.

This process still is carried on by the mucosa of the digestive tract in the higher animals, and a modification of this process brings about the defensive ferments for the elimination of the toxic albumins in the blood.

All albumin molecules are large and colloid; that is to say, they are unable to pass through a dializing membrane or escape from the blood to the secreting and excreting apparatus of the body. The breaking down of the toxic albumin molecule is the prime function of the ferment. The ferments which have accomplished their purpose remain, however, for a long time in the body of the organism in which they were once generated. This, no doubt, is because of their albuminous and colloid structure. The resultants of the action of the ferment upon the toxic colloid albumin, however, are crystalline products, soluble in the blood-serum and easily and quickly excreted by the body, and just as easily passed through the dialyzer.

The power of the defensive ferment which is produced in the blood is just as potent in breaking down its particular albumin outside the body, in the test tube, as it is in the body in the circulating blood. This fact is taken advantage of in the Abderhalden reactions for discovering or recognizing the defensive ferment in the human body in health and disease.

The defensive ferment of the female organism, specific for placental albumin, remains in the body for a few weeks only, three to six weeks in most women.

Passive Transmission

Another remarkable phenomenon has lately been demonstrated by the method of Abderhalden. It has been quite conclusively shown that the defensive ferment produced in the blood of one animal, and recognized in the blood-serum of that animal by the Abderhalden reaction, may be transferred to the blood of a second animal by the injection of a small portion of the serum of the blood of the animal in which the defensive ferment was first aroused. This ferment remains for a considerable time in the blood of the passive animal that has never suffered any poisoning from the albumin which the ferment is designed to wreck or catabolize.

A portion of the blood of this passive animal may now be injected into a second, a third, or even a fourth animal in series, and the original defensive ferment can be recognized by the Abderhalden method in each of them. It would appear, indeed, that the ferment has the power of reproduction in the blood of the passive animal. These experiments have been performed by Abderhalden and Gigorescu, by Arno E. Lampe, and by A. Fauser,* and there can be no doubt of their reliability and of the significance which these experimenters attach to them.

So suggestive did this phenomenon appear to Fauser, who used the blood of patients suffering from dementia præcox, that he hastened to publish his results without delay. In his experiments, he took the blood-serum from a patient giving a reaction to human testicle, human thyroid gland and human brain cortex, and injected

*Fauser, A., Muenchener Medizinische Wochenschrift, July 21, 1914, vol. 61, p. 16.

this serum into a rabbit. In a few days, he removed some of the blood of the rabbit and found that it contained defensive ferments against human testicle, human thyroid gland, and human brain cortex, and no other ferments that he could discover by using fundaments taken from the rabbit's body.

The Great Psychiatric "?"

There is every evidence of the toxic origin of dementia præcox. This belief (for it can hardly be called a theory, since it is not made the basis of research) has been held by many psychiatrists and doubtless is the unexpressed opinion of Kraepelin himself, who originated the name.

It has occurred to me, as it doubtless has occurred to many others, that recovery from dementia præcox depends upon the production in the patient's blood of a defensive action against the toxic element of the primary disease. This defensive action is manifest in many ways. In other conditions, we know that such an action is going on by the presence of agglutinins that act upon the organism of the primary intoxication. This obviously is impossible to demonstrate in dementia præcox, since we have no knowledge of the organism—if organism it be—that initiates the disease. In other instances, they are recognized by precipitins, but here again we are unable to use a method that has proved valuable in many conditions.

It is my firm conviction that dementia præcox is attended by evidences of a pluriglandular dysfunction not unlike the pluriglandular dysfunctions of pyorrhea alveolaris, streptococcus tonsillitis, cholecystitis, and various forms of colitis. It is my belief that the clinical manifestations of this disease point indubitably to a toxemia from a toxic albumin of a parasitic, a metabolic or of some other unknown origin. It is not unlike the toxemia of general paresis, the primary source of which we have at last discovered in the toxic albumin produced in the tissues of the body by the syphilitic spirochete. I further believe that just as promptly after the discovery of the cause of dementia præcox, as we have observed after the determination of the cause of general paresis, we shall discover a rational method of treatment.

The toxic albumin, dead or alive, which initiates the toxemia of dementia præcox and is followed by the well-observed train of pluriglandular dysfunction is the great psychiatric x of the present day. The search for the defensive ferment against this x is an object worthy the effort of an army of research-men. It is my belief that this defensive ferment is responsible for the waking up and temporary improvement of many cases of dementia præcox and for the permanent recovery of a few.

It is more than likely that the reason why so small a number of patients recover permanently depends upon the rapid disappearance of the defensive ferments from their bodies. When it is gone, the patient relapses and again becomes clouded in intellect and shut-in in emotions by the toxemia or drunkenness produced by the disease.

A Plea for Research Along Therapeutic Lines

I have tried, up to the present time, to arouse an interest in research into the cause, the cure, and the prevention of dementia præcox. I have never looked upon myself as in a position to say exactly what researches should be made. The motive for research has been strong within me, and when I have been bantered on the generality of my criticism of psychiatric inactivity and my demands for research, I have insisted that it was impossible to prescribe for such an adventure into the unknown, as research always is, and as it certainly must be in trying to discover the cause, method of cure and prevention of dementia præcox.

Now, however, I have something actually specific to propose.

Let us take a case of recovered dementia præcox, or one of those cases which exhibits a temporary improvement lasting a few weeks or a few months. We have repeatedly made the Abderhalden reaction upon this patient and found the serum of his blood to contain ferments capable of wrecking the albumin of the testicle, the albumin of the thyroid gland, and the albumin of the cerebral cortex. I believe that his recovery is brought about by the presence of another ferment, one capable of wrecking the toxic albumin of the primary disease—that is the albumin x.

Now, if I am right in presuming that improvement or recovery was due to this ferment, and that failure of other patients to improve and their failure to recover are chargeable to the inadequacy of this ferment, then we might separate these ferments from the other constituents of the

patient's blood and multiply them greatly in quantity and potency in the same manner as we multiply the antitoxins of diphtheria in the blood of the horse—we might, in other words, repeatedly inject a horse with the blood of our recovered or our improved patient, and thus secure a high degree of immunity in this animal. In other words, we might produce a large quantity and a high grade of defensive ferment in the blood of this animal, by properly injecting it with the blood-serum of our recovered or our improved patient.

Next Step—Find All the Ferments

The next step in the research would be, to determine that all those ferments which we had recognized in the blood of our improved patient were now to be found in the blood of our passive animal. If they were there, as we have a right to expect, we could then assume that all other ferments were there also that were originally in the blood-serum of our recovered patient, especially the ferment against the toxic albumin x, which ferment I assume is responsible for the improvement or the recovery of our patient.

From this time on, our animal will furnish us blood from which to extract serum containing the defensive ferments against the toxic albumin x, to be used upon such patients who fail to improve and show the same pluriglandular dysfunctions or any other symptoms which can be relied upon to put them in the same category as our recovered or improved patient with whose blood we began our research.

It will be observed in Kraepelin's recent writings that he holds to the old group of dementia præcox; but he divides this group into a number of smaller and more or less homogeneous subgroups. It seems to me more than likely that the study of the physical conditions of dementia-præcox patients will render necessary various sources of defensive ferments for the treatment of patients in these various groups.

From Whom to Expect This Research

There are three distinct sources, or three distinct institutions, from which the patients, the profession, and the friends of the insane have a right to expect this and similar better-planned and more promising researches. Obviously, the all-powerful boards of administration, each of whose members receive a salary from the treasury of their respective states almost equal to that of the governors of those states themselves, ought to be alert to set on foot adequate research into the possibilities of the cure of their 190,000 wards.

In the state of Illinois, for example, the Board of Administration that has the care of nearly 14,000 insane persons, upon whose custody it expends nearly $4,500,000 a year, is distinctly and especially commanded by the Code of Charities, which authorizes the payment of their salaries, to support such research. Yet the Psychopathic Institute at Kankakee has never been an institute of research and has never been adequately supported by the Board of Administration. The same conditions prevail in all other states, and it is absolutely disheartening to a person with any motive for research to visit the psychopathic institutes in New York, Michigan, and Illinois.

My experience leads me to think that there is little hope from the allpowerful boards of control, who seem to be more interested in building castellated prisons, which they term "hospitals," than they are in the modest industry and enthusiasm of research-men seeking a condition which will make the castellated prisons unnecessary.

The enormous growth of wealth in the United States has resulted in the establishment of memorial institutes of one sort and another in all parts of the country. Some of these are wholly private, and some of them are more or less public, being connected with large educational foundations. The Rockefeller Institute at New York, Clark University at Worcester, Massachusetts, and the Phipps Institute at Johns Hopkins are examples of the foundations from which we might, possibly, expect research for the cure of dementia præcox. Up to the present time, none of these institutes have made any adequate mechanistic research into this darkest continent of our pathologic ignorance.

While any citizen may reasonably demand of the officers of their state a research into a possibility of saving the state such enormous expenditures as are annually made for the custody of the insane, such a private citizen has no claim upon the service of such private endowments as we have mentioned; and, unfortunately, these private endowments are managed by trustees who seem to feel in no way responsible for the public expenditures for custody, or for social loss from disease for which that custody is necessary.

There is another class, or group, well prepared to undertake such research. They might perhaps be influenced to undertake it if they could see a sure road to realize on its successful issue. The pharmaceutical houses of the United States derive no inconsiderable profit from the manufacture and sale of immunizing and curative serums. They see that the use of drugs is rapidly diminishing, and that the use of serums is rapidly increasing.

At least one out of every thousand youths of high-school age succumbs to dementia præcox. The early cure and prevention of this condition would open a market for an enormous quantity of a successful serum. It is possible that some enlightened commercial house, which now maintains laboratories for the production of diphtheritic, tetanus, and other serums, will undertake as a pure business proposition such researches as may put in their hands a profitable monopoly.

The friends of the insane could do service to research by calling upon the various members of the board of control in the states in which they reside, urging by every argument and insisting by every political influence that these and similar rational researches be undertaken.

Many of the friends of the insane are now supporting, at an expense of $50.00 to $100.00 a week, their demented sons or daughters, their uncontrollable brothers or sisters in private institutions that are places of confinement and custody only, and in no way except appearance better than the state institutions, where similar care can be secured at $1.50 a week. It would be wiser, better, and more humane to remove these patients from their gorgeous surroundings, place them in the perfectly satisfactory state institutions and devote the money saved thereby to the encouragement of the research which may result in finding a cure at last.

The Letters of Doctor Leonidas Playfair

Addressed to a Young Physician Just Entering Practice

By A. H. P. Leuf, M. D., Philadelphia, Pennsylvania

EDITORIAL NOTE.—The difficulties of the young doctor! How many there are and how mountain-like they seem to the youngster; and how small and inconsequential they appear to us older fellows compared with the burdens we are bearing. However, let us give the boy a lift, in other words—advice! Old Doctor Playfair understands the problems and aspirations of youth and can speak for all of us. If you like his letters, tell him so.

Letter Two

MY DEAR FRIEND: Accept my congratulations on having secured a city location to your liking, and my sincerest regret at your attack of sore throat and general "cold." This was no doubt due to your overeating of unusual food at the two banquets you attended, and associated constipation, causing enteric infection. Beware of this in the future, but should it, nevertheless, occur again, I would advise taking a brisk hydrogog purge and abstaining from food for one or two meals, taking, meanwhile, such medicine as will give you easement.

Returning, however, to the subject of further advice concerning practice, it is most desirable to counsel you about your office, than which nothing else is so important except unfailing, faithful attendance during your regular hours.

It is well to have the office properly equipped for the best kind of work as soon as affordable. Houses are not ordinarily, built to facilitate a doctor's work, so that the proper office arrangement requires the rebuilding of an old house or the erection of a new one. It is advisable to have the office part as nearly absolutely separate and distinct from the dwelling portion as this can be made; on which account a corner-house is preferable, because permitting an office entrance on one side and a private one on the other. A grocer, a butcher, a baker or any other tradesman would not expect to do much business if he sold his wares in the parlor of a dwelling-house, and exhibited them through an ordinary pair of windows. Such a merchant provides a special space for the exhibition and sale of his goods. There are people who do run a little grocery business in the front rooms of their houses or in their cellars, but, doing so, stamps them for what they are.

It is substantially the same with the doctor. Men doing a good practice—leaders, I should say, in medical work—have special facilities for seeing and treating their patients. These equipments stamp them as prosperous. The doctor who uses for medical purposes one or two ordinary rooms in his private dwelling must expect to be classed with the cellar-grocers. He should get away from this wrong method as soon as he can. It is more important to do so, in my judgment, than it is to get a horse and carriage.

The Equipment

I would like to make a few suggestions that seem to me to be important in regard to your office and waiting-room equipment. Avoid the exhibition of specimens, bones, skeletons, bottled tapeworms, and various portions of the body. These things make an impression, and almost invariably an undesirable one. People not impressed by these things are indifferent or amused. Those who are impressed are liable to be shocked, and frequently prefer to visit some other less morbid or foolish physician. The question often arises in the patient's mind as to the original ownership of the specimens or skeleton displayed—whether their former owners were not once patients of yours, whether that is your usual way of handling defunct patients, and whether the onlookers themselves may not some day have a portion of their own anatomy on exhibition in your office.

It is perfectly proper, in fact very desirable, to have your office and waiting-room walls hung with pictures. But these should be of such a nature as to be pleasing to all manner of people, and objectionable to none. The more your rooms can be made to have a purely medical air, without the appearance of bombast, brag or quackery, the better. These pictures should be good as well as uncommon. Avoid illustrations of operations or of anatomic lectures or dissections, for they are grewsome and offensive to many people. Eschew religious pictures; for most of them are sectarian, and what would please some of your patients might offend others. Be neutral in all such matters.

There are some very suggestive illustrations of different phases of medical practice that would offend no one, while likely to interest all. Then there are pictures representing the great masters of medicine of the past, in whom a good many individuals are interested, to which a card could be attached with a brief outline biography, preferably typewritten. Death-masks should be avoided as gruesome. Statuary, on the contrary, is not objectionable, provided it is chaste, such, for instance, as the unique groups by Rodgers.

Simply because a picture or a statue is classic, does not justify its presence in your waiting-room or office; that is to say, in the minds of many, if not most, of your patients, whose classical education, at least in matters artistic, is much inferior to their moral sentiment. You can indulge your tastes for the esthetic in your private rooms without risking giving offense to the countless peculiarities of diverse patients.

Exhibiting Instruments and Books

There is a difference of opinion as to whether it is well to exhibit instruments. I think it is eminently proper and desirable that you should do so. This is best done by placing them in the modern instrument cases, composed of a white enameled frame work, paneled and shelved with glass. Instruments so exhibited are noticeable only *en masse* by their reflected glitter, and announce to the patient that you are a surgeon as well as a physician. It is also an advantage to have them under constant view to guard against their deterioration.

It is perfectly proper to have in plain view the drugs that you dispense. These should be arranged in some uniform manner, say in bottles that are all alike in style and similarly labeled. It shows that you are equipped for the dispensing of your own drugs, and inspires the patient with the added confidence that you control your supply of remedies, and, thus, know what your patient gets.

A collection of books is one of the most desirable equipments for a doctor's office, and it seems needless to add that these should be mainly upon medical subjects. They should be books worth having, and as such they merit the best of housing; by which I mean that with them should go first-class bookcases, preferably of the sectional variety with glass lids. With such cases it is possible to start with one small one, gradually adding to it as the books accumulate; while the cases can be rearranged from time to time in different ways, securing artistic effects. When a sufficiently large enough number has been acquired, the books then may be grouped according to size, each

sectional case lettered, and the books within designated by the section letter and a number. They then should be indexed on cards so that they can be located readily.

Finally, I want to say that it pays to furnish an office and waiting-room as nicely, as elegantly, and as comfortably as your means will permit. They should be kept clean, should be tastily arranged, and contain some potted plants if there is room for them, particularly in winter. Plants are desirable, not alone because of their appearance, but because they absorb the carbonic-acid gas exhaled in the room, and because they throw off oxygen to serve you in breathing.

The Office-Attendant and the Wife

Aim, at the earliest possible moment, to have your door regularly attended by someone specially paid for this purpose. Practice looks too much like a family affair to have any member of the family come in contact with patients in this way. This is particularly true of the doctor's wife, whom many people credit with knowing all about his patients. Her presence in the waiting-room, and her letting patients in or out of the house, give additional probability to this belief in the minds of many people. She should keep aloof from the patients and never hob-nob with them, although always observing a pleasing and friendly manner that insures a reciprocal sympathy and good will.

A well-equipped office should have facilities for washing and for attending to calls of nature, preferably without necessitating the passage of patients through the private part of your house while going there. Still, it is well not to have it too generally known that you have such conveniences, lest they be unnecessarily taken advantage of by selfish individuals who care not how much they may consume your time or add to the labor of those who work for you.

The Doctor's Sign

Recollect that the doctor's sign serves for identification only, and is not intended as an advertisement. There is some difference of opinion as to whether your name should be preceded by the word "Doctor," or its abbreviation, "Dr.," or be followed by the conventional "M. D.," instead. I should say that, inasmuch as "M. D." is more explicit, showing of what you are a doctor, it is the ideal way. On the other hand, "Doctor" is most intelligible to the ignorant, its abbreviation, "Dr.," not as much so. As a matter of business, therefore, it is important to precede the name by the word "Doctor" in proportion to the ignorance of the community in which you are located, while you can most safely enjoy the privilege of being more exact in the use of "M. D." after your name, when located among the well educated.

As to whether you should use your given name or initials on your sign, also depends upon similar circumstances. It is true that a name as common as Smith makes the use of given names or initials necessary, while not required with unusual names. These are small things; nevertheless they count, and it is well to be governed by them when there is no important consideration except money.

Other signs worthy of a conspicuous place in your office may read as follows:

"No office-hours on Sundays or Holidays."

"Office Consultation strictly cash."

"Office Consultations from $1.00 to $10.00."

"Special services entail a corresponding charge."

"Outside calls made after evening hours or before morning hours are liable to double charge—Night Calls always."

"Special office appointments must be paid for if not kept, unless canceled by consent."

While there is objection to having your office-hours displayed upon the outside, it is very advantageous to have them posted in your waiting-room and office, particularly the former. Many patients are apt to forget your office-hours, though you have them designated on your cards, prescription-blanks, labels, and medicine-envelopes. They are unnoticed by most patients. A sign in your waiting-room compels attention, because those waiting for you are in enforced idleness, and look about them in the attempt to pass away the time.

Never make the mistake of having a branch office. It is a waste of time and makes a bad impression upon patients. They are never sure as to where they can find you. People who think will realize that you are not as busy in the practice of your profession as you are in trying to get work. Your expenses are increased, and your efforts dispersed instead of being concentrated. It is far better to have a single office as well equipped as your means will allow, in which may be concentrated your own efforts and the thoughts of your patients.

In my next letter, I shall be pleased to take up the matter of office hours; so make no arrangements about them until I write to you again, but meanwhile keep yourself within ready call of possible patients chancing your way, so long as you are not engaged in making professional visits elsewhere—as I hope.

Your true friend,

LEONIDAS PLAYFAIR.

Diseases of the Alimentary Canal

By A. L. BENEDICT, A. M., M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"

EDITORIAL NOTE.—This is the second paper in Doctor Benedict's series on diseases of the alimentary canal. Every physician who has been disappointed with his method of treating "indigestion" or "dyspepsia"—and who has not—should study these papers faithfully. There are more of them to come.

FROM the purely "functional standpoint": This expression is used here rather than "functional diseases," for the reason that in many instances the strictly functional nature of disease is questionable, while in gastric disorders generally a condition that logically may be considered functional tends to follow or rapidly to develop an organic lesion. However, even when an organic disease is present, it is well to consider the functional state of the stomach without prejudice, since the immediate therapeutics of a case depends largely upon the immediate condition.

Theoretically, one can make an elaborate tabular view of functional gastric disturbances, according as each secretion, the muscular function, and the sensibility is increased or diminished, or in entire abeyance, or otherwise perverted. The possible combinations would make a formidable array. Practically, this scheme can be somewhat simplified, but, on the other hand, it does not conform to a classification so beautifully regular.

Gastric Sensation

The normal sensibility of the stomach is slight: warmth, chill—either following thermic stimuli or as subjective sensations—"burning," in more than the literal thermic sense, up to pain; a sense of emptiness or of distension, hunger, thirst, cravings for special foods or beverages or for nonnutritive substances, are about all that can be felt. The last three sensations are rather dubiously due to the stomach itself, but seem to depend in an unexplainable way upon metabolic conditions generally.

The term abnormal, as applied to any disturbance of sensation, must be analyzed, so as to determine whether the sensation itself is abnormal from the functional standpoint, or whether it is perfectly logical and, therefore, normal, but in response to an abnormal stimulus from without or from some intrinsic abnormality of other nature. For instance, gastric functional disturbances would ordinarily be classified as "excessive," as the technical equivalent of a sense of burning or pain. But, if a healthy person accidentally swallows a strong acid, pain is the natural result. Barring necrosis or the concomitant analgesic action of, for instance, phenol, it would be an abnormality if, under the circumstances, pain were not felt. So, too, if there is an excess of secretion of hydrochloric acid by the stomach itself, or if there is an ulcer of the stomach, then the fact that pain is felt is absolutely normal from the functional standpoint.

There is a temptation to say that the normal sensibility of the stomach is so slight that it can not be depressed further. This is not quite accurate, for there are persons who have no appetite, either as a direct result of gastric or general diseases or as a chronic condition, and who are insensible to differences in temperature of food and liquids introduced. Hunger seems to depend almost entirely upon the relative absence of or distension of the gastric rugæ, and to have little connection with the nutritive qualties of the contents or the general nutrition of the body. In fact, it is (naturally enough, if we consider the real relation of causes) more marked in excessively well-nourished persons than the reverse; it is not a durable reflex from gastric contraction, since it disappears early in starvation.

Conversely, the dependence of hunger and appetite, as well as the opposite condition of satiety, upon the state of the gas-

tric rugæ is pretty definite. A small stomach is more quickly satisfied than a large one, and the boulimia of gastric dilatation really is in accordance with a general law, that satiety occurs when the rugæ are moderately distended, rather than a strict functional abnormality. So, too, the prompt reapparance of hunger may occur in persons with relaxed cardia; which is likely to accompany deficient secretion of hydrochloric acid, and indicates simply that the stomach empties itself quickly.

Why People Eat Too Much

On the other hand, the moderate irritation of the gastric wall by excessive or obstructed acid secretion, occasionally that of an ulcer, may cause undue appetite. As is well known, boulimia tends to occur in persons having too little to occupy their minds and in certain mental states. The boulimia of old persons may be explained on either of these bases. Boulimia may be part of the delusion of grandeur in paretics and, somewhat analogously, when there is no question of paresis, an otherwise normal individual may take pride in the amount that he can eat or drink. Young adults also often overeat because of the mistaken idea that they can accumulate reserve of strength, as one could lay up money in a bank.

Boulimia is mainly to be controlled by discipline and by attending to gastric dilatation and other organic states causing it. Appetite may be stimulated also by attention to the local gastric and the general health. So far as drugs are concerned, hot dilute alcoholics, strychnine, quassine, or any simple or aromatic bitter may be employed. None of these is absolutely dependable. If lack of appetite is psychic, it requires the corresponding treatment. Any pleasurable excitement or break of monotony, company to dinner, change of scene, for many women any kind of meal, however poor, that they have not had to cook or even plan themselves. Chronic anorexia may be part of a general asceticism and habit of inhibition.

It should be remembered that "pain in the stomach" does not necessarily apply to the stomach in the anatomic sense, but may mean gall-stones or the most varied kind of referred or indefinitely located pain. Even if gastric, it may have nothing to do with the gastric function, but may be neuralgic, neuritic, rheumatic, syphilitic, tabetic, etc.

The normal gastric peristalsis recurs at approximately 7-seconds' intervals, but the rhythm is not so regular as for respiration and pulse. With the intermittent relaxation of the pylorus, about half of a light, partly liquid meal is expelled within an hour, and the stomach should be empty in from two to six hours, according to the amount, consistence, and variety of the food. A very lenient, approved test is, to wash the stomach in the morning after a hearty dinner, when it should be entirely empty. In the writer's experience, a delay of food—barring perhaps some tenacious residue, such as oatmeal scales—beyond twenty-four hours, always has been associated with cancer, although nonmalignant cases of such delay have been reported.

Cannon has proved physiologically that the relaxation of the cardia is due to the stimulus of hydrochloric acid. In the clinical sense, exactly the opposite is the case; that is to say, food slips rapidly through a stomach that secretes none or but very little hydrochloric acid, and is delayed in hyperchlorhydria, allowing, of course, for actual muscular weakness, ptosis, pyloric obstruction and the like.

It should be distinctly understood that the emptying of the stomach does not depend entirely upon muscular power. A relatively atonic stomach, with no appreciable hydrochloric acid to cause the pylorus to contract—remembering the difference noted between physiologic and clinical experience—and not so dilated or ptosic as to make the emptying of the stomach literally uphill work, usually empties itself quite rapidly. With excess of acid secretion or fermentation acidity to stimulate pyloric closure, or with any condition of the pylorus, such as, for example, a typic ulcer, fissure, localized inflammation, rendering it more responsive to such stimuli or, *a fortiori,* with an organic obstacle at the pylorus, there may be an actual excess of motor function, with a deficiency of motor result. With a continuance of these conditions, however, the gastric muscle tends to become weak and finally atrophic, with dilatation, very much after the analogy of the heart.

Auscultation of the stomach is a neglected art, though one of great value in determining the actual motility, as distinguished from its result—emptying-power. Some practice is necessary, but one can finally distinguish all sorts of disturbances

of rhythm, irregularity of wave, and inconsistencies between muscular energy exerted and efficiency.

Treatment of Gastric Motor Defects

For deficiency of muscular action, there is virtually one drug to be used, namely, strychnine, which is more definite than galenicals, better even than brucine, and more efficient than bitters. But, it should be borne in mind that strychnine does not directly increase a function; it simply renders the muscle or gland more susceptible to accidental excitoreflexes. Likewise, it should be remembered that the action is on the muscular power, not on the ultimate result. Here is an illustration of the need of auscultatory or x-ray investigation, rather than of dependence on the test as to emptying-time.

Granted that we find a stagnation of stomach contents, but with stormy, inefficient peristalsis, the indication is, to reduce hydrochloric acid if in excess, to lubricate with pure white mineral oil, and to administer bland, pultaceous food, rich in fats and without large solid masses, if the pylorus is obstructed or is spastic. It has even occurred to the writer that digitalin, strophanthin, or the like, may be indicated. to secure a strong, slow, steady contraction, in the event of moderate obstacle of either functional or organic nature at the pylorus, just as in similar cardiac problems. It is, however, difficult to check the result of such therapy clinically, and there often are contraindications in the heart itself.

To control stormy peristalsis—supermotility—we must, of course, relieve hyperchlorhydria, fermentation, etc., remove irritating factors from the diet, sometimes aid digestion in a direct sense; but there remains an indication for more direct treatment.

Lavage comes into play here, employing lukewarm, slightly alkaline solutions. Conversely, if motility is weak, alternations of hot and cold lavage are indicated. It is important to guard against introducing any great weight of water into the stomach at once, making the limit at most 500 Cc. Even if the endeavor is, to calm a supermotile stomach, it is dangerous merely to fill it up and then empty it. A needle-douche may be used inside the stomach, but it is doubtful whether it has any special advantage, inasmuch as the needle action is limited to the first spurts of water.

To stimulate a weak stomach, a spray of menthol in pure mineral oil may be employed, using a pump of known capacity, so that too great inflation may be avoided. Alternate inflation and deflation, up to a volume of 1000 Cc. at one time, exercises the gastric muscle. It is scarcely necessary to state that various local anodynes, beside alkalis, may lessen the excitoreflexes upon which stormy peristalsis depends. As for any direct sedation of this sort acting on the muscle, we are limited to the mydriatic group of remedies, and, for obvious practical reasons, mainly to cannabis indica; for which, again, we are limited to really efficient, standardized preparations, many preparations being practically inert.

The proper performance of the motor function of the stomach depends upon the joint action of the muscular coat and of the cardiac and pyloric sphincters. Moreover, this implies a tonic action of the sphincters, with due relaxation at intervals, and a clonic action of the general musculature. The latter also consists of coats approximately corresponding to the longitudinal and circular coats of the intestine, but with well-marked oblique strands in addition. There is, therefore, a very complicated muscular action, involving mutual contraction and relaxation, required for the proper performance of function.

Even with the x-rays and the most elaborate tests of "emptying," it is impossible clinically to reduce physiologic principles to a practical basis for diagnosis and treatment. In particular, there is not a uniform tendency of all muscular parts toward a state of deficiency or excess of contractility. Except during ingestion and for the occasional relief of gaseous distension or voiding of irritating contents, the cardia should be in a state of permanent closure.

Belching and "Puking"

It should be remembered that belching of gas and vomiting, not to mention puking in infants, while not strictly normal phenomena, frequently are conservative factors. Gastroenteric conditions in horses, who rarely vomit, are notoriously serious on this account, and it may be stated that the more serious gastric conditions short of cancer occur by preference in human beings who do not vomit readily.

It can readily be understood that there is not a uniform indication to depress or in-

crease the muscular power of all parts of the stomach; also that there are many conditions in which the administration of strychnine, cannabis indica or any other method of treatment acting in one direction may be limited by contraindications, and that the proper balancing of opposite indications many times is a very difficult matter or impossible.

For example, consider a case af spasm of the pylorus, without proof of ulcer or indication of hyperchlorhydria, with stormy and irregular peristalsis, but with relaxation of the cardia, so that there is constant belching, waterbrash, and often occasional vomiting.

How can we sedate the two former conditions and stimulate the latter? The writer does not know, except that the cleansing of the whole organ by means of lavage allows the factor of rest to operate, and that local massage of the cardia by passage of a bougie is possible, though not always accepted by the patient, and that it is relatively efficient. There seems to be no superiority over the bougie, connected with elaborate devices of beads of different sizes, or with inflatable balloons, the exact position of which can scarcely be directed from above.

How strong and continuous should the contraction of the cardia be, anyhow? We can not go so far as to say that it should be relaxed only by masses from above, in swallowing, for its occasional relaxation for belching of gas and vomiting is an essential conservative factor. Many persons cannot eat a hearty meal and then stoop over, as to put on shoes, without belching and regurgitation of small quantities of ingesta. So far as the writer knows, this phenomenon is not amenable to treatment. Is it strictly pathologic? There is no universal physiologic standard.

Somewhat similar difficulties apply to the pylorus. Given, for instance, a normal state of general muscular action of the gastric wall, with relaxation or spasm of the pylorus, or a condition of the former opposite to that of the latter, what shall we do? Except for the somewhat indirect methods already alluded to, such a problem is extremely puzzling. The writer has had no experience with mechanic devices for dilating the pylorus without operative exposure.

The Gastric Secretion

Aside from a practically inert mucus, the secretions of the stomach are two: hydrochloric acid and pepsinogen; the latter converted into pepsin by the former. It has been alternately claimed and denied that rennin is a distinct ferment. All things considered, it is better, at least from the practical clinical standpoint, to hold that milk coagulation is an accidental function of pepsin. In the vast majority of cases, both milk coagulation (after neutralization of the acid or the use of too small a quantity of gastric filtrate to involve the action of acid) and proteid digestion are found present in stomach contents. In the majority of the comparatively few cases in which either reaction is negative, the other is also. As various manipulations of commercial milk render it noncoagulable, and, also, since various blunders and interfering factors may vitiate the reliability of clinical tests either of peptonization or coagulation, it seems warrantable to ignore the occasional reports of discrepancies between the two tests.

Ptyalin digestion of cooked starch also continues in the stomach until a considerable degree of acidity is present. The impression is given by most textbooks that this action is inhibited by the normal full hydrochloric acidity and, *a fortiori,* by hyperchlorhydria.

In the writer's experience, sugar is always present in stomach contents in appreciable amount, providing the test meal contains cooked starch and unless the contents are aspirated very late.

(To be continued.)

Refraction for the General Practitioner

By Thomas G. Atkinson, M. D., L. R. C. P. (Lond.), Chicago, Illinois
Author of "Essentials of Refraction"

EDITORIAL NOTE.—Are you following this series of papers upon refraction? If not, you are missing a good thing. Refraction work is easy to learn, is pleasant, profitable, and gives opportunities for expansion for many ambitious men. Look up the back numbers in Doctor Atkinson's serial. Buy a copy of his book. Write him for details if you do not understand him fully.

Fitting the Glasses

AFTER the refraction of the eye has been measured and corrected and the necessary lenses prescribed, there still remains the very important task of properly fitting the glasses to the patient's eyes and face, either by oneself adjusting the frames or mountings or by carefully prescribing every detail for the optician's guidance. The latter nowadays is the more common procedure. The prescription-blanks furnished by the optical houses contain tabulated forms for the proper measurements of the frames and mountings, and such other instructions as pertain to the mechanical phase of the matter. The refractionist makes the various measurements and fills in the forms; these being fully and carefully followed by the optician in making the spectacles.

The proper fitting of the glasses is based upon a few definite optical principles, the first, and probably the most important, of which pertains to the relation between the visual axes of the eyes and the optical centers of the lenses, and may be stated as follows:

The visual axis of the eye should cut the mean plane of the lens perpendicularly at its optical center.

In order that the visual axis may cut the lens perpendicularly, the plane of the lens must stand at right angles to the visual axis; and, in order that it may cut it at the optical center, this optical center must coincide with the visual axis.

It is plainly evident that a lens will exert its proper dioptric strength only when its plane is perpendicular to the visual axis; for, all lenses really are a series of prisms, set base to base (convex) or apex to apex (concave), and, if the visual axis passes through them obliquely, the prismatic effect is increased, either toward or away from the base, and the convexity or the concavity of the lens is increased toward the eye. A glance at the accompanying illustrations will make this clear.

Cylinders may be regarded as a simple pair of prisms, set base to base or apex to apex. Hence, if the visual axis cuts a cylindrical lens obliquely, it simply acts as a stronger cylinder. Spheres, on the other hand, are, in effect, concentric series of triangular prisms, whose bases or apices (as the case may be) converge toward the optical center; consequently, if the visual axis cuts a spherical lens obliquely, it not only acts as a stronger sphere, but takes on the nature and effect of an added cylinder having its axis at right angles to the axis about which the lens is rotated.

It is obviously impossible to attain a condition of ideal perpendicularity; for, the lens can be placed only so as to be perpendicular to the visual axis when the eye is in one particular position, and any deviation from that position by rotating the eye will disturb the perpendicular relation. For example, if the glasses are so adjusted that the visual axes of the eyes at rest (parallel) cut the lenses perpendicularly, then the moment the eyes are converged the visual axes will cut the plane obliquely; and vice versa.

With ordinary lenses, the best that can be done is, to adjust the glasses so that the plane of the lenses will stand perpendicular to the visual axes in the position of most frequent use; if for distant vision, in the vertical plane, if for near vision, inclined a little downward and inward, so as to front the converged visual axes. In adjusting bifocals, the planes of the lenses should be set between the near and the distant axes, a trifle in favor of the near axes.

Nowadays, however, this matter of perpendicularity is very effectively met by the use of what are known as periscopic lenses —concavoconvex lenses, made so that their inner curvature conforms as nearly as practicable to the sphere of rotation of the eyeball. In this way, the visual axis cuts the lens perpendicularly whichever way the eye may be turned, or so nearly perpendicularly as virtually to do away with

prismatic effect in all but the very high degrees of dioptrism. All patients should be encouraged to take periscopic lenses, as they amply justify the slight additional cost. Even cylindrical lenses are now made in this periscopic form.

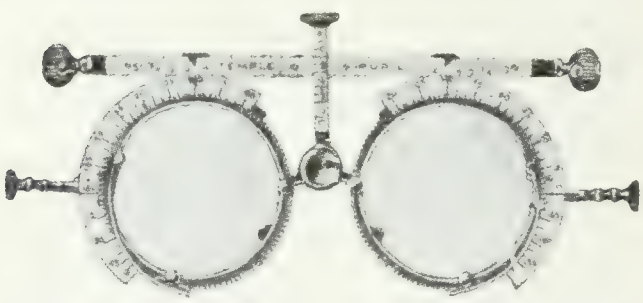
When for any reason the patient declines a periscopic lens, we often may approximate a periscopic effect in compound cylindrical and spherical lenses (in which the prismatic effect of obliquity is most noticeable), by arranging the combination so as to get a minus cylinder on the inside of the lens and a plus sphere on the outside. If the correction is a minus cylinder on a plus sphere, there is nothing to arrange, of course. But, if it be a plus cylinder on a plus sphere, then we can arrange it by what is known as transposition. We change the cylinder to a minus, also changing the axis to right angles, then add together the two quantities to make the new sphere. Thus:

	+ 6 cyl. ax 90 with + 8 sphere,
Trans.	— 6 cyl. ax 180 with + 14 sphere

With a combination of minus cylinder on minus sphere, such an arrangement, of course, is impossible. Patients requiring this correction must either get toric lenses or stand for the prismatic annoyance.

Pupillary Distance

In adjusting glasses so that the optical centers of the lenses shall coincide with the visual axes, the chief factor is the measurement of the pupillary distance (conveniently designated as the P. D.), that is, the distance between the centers of the two pupils. Manifestly, if the optical centers of the lenses be set apart the same distance, and so as to be equidistant from the center of the nose-piece, they will coincide with the visual axes for parallel vision.



Illustrating graduated trial frame, by which pupillary distance, temple measurements, and height of bridge can be estimated.

A rough method of measuring this dimension is, to have the patient look steadily straight ahead while we hold a meter rule horizontally across his face, cutting the two pupils as nearly as possible through their centers, then read the pupillary width on the rule.

A much better method, however, is to use the spectacle frames and P. D. discs which

Illustrating the perpendicular plane of the lenses for near and distinct vision respectively.

come with the trial cases (illustrated in the accompanying cut). Mounting the frame on the patient's face and adjusting the earbows, we then place in the cells the two plano lenses having a line bisecting them. This line we set vertically in each cell. Now, by turning the knob at either end of the horizontal bar above the frame, we widen or narrow the distance between the two lenses until the vertical lines exactly cut the centers of the two pupils. The index on the observer's right hand of the bar shows the pupillary distance.

If one wishes to be still more accurate, one can use a Maddox pupil localizer; but I cannot devote the time or space to give a description of them here. They are seldom used in ordinary practice.

Decentering for Prisms

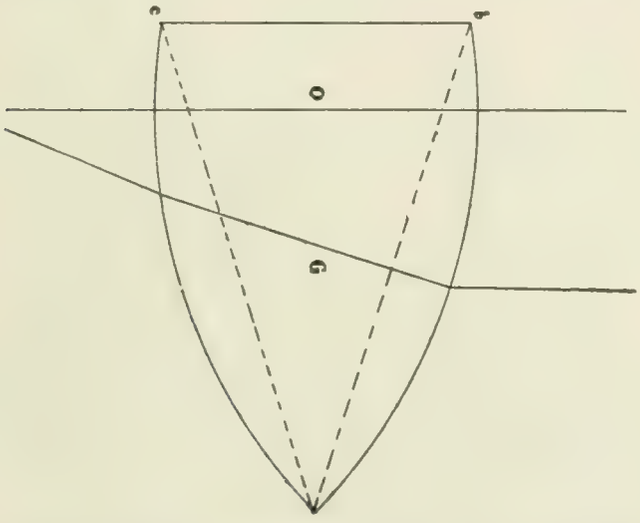
Not infrequently we take advantage of the prismatic effect produced by a disturbance of the relations above explained, to give the patient the benefit of a prism before the eye for the assistance of muscular imbalance. (See previous article.) Thus, we deliberately order the lenses to be adjusted so that the optical centers do not coincide

with the visual axes, for the purpose of getting a prismatic effect. This procedure is known as decentering the lens.

Bearing in mind that plus lenses really constitute a series of prisms set base to base, and minus lenses a series of prisms set apex to apex, you can readily see that by decentering the former in any direction we get the effect of a prism with the base away from the direction in which we decenter; by decentering the latter, we get the effect of a prism with its base toward the direction of decentration. Thus:

Plus lens decentered	outward	prism base	in
" " "	inward	" "	out
Minus lens decentered	outward	prism base	out
" " "	inward	" "	in

The stronger the lens, whether plus or minus (i. e., the stronger the prisms which compose it), the greater will be the prismatic effect of the same degree of decentering. Thus a 2 D. lens only will have to



Illustrating the prismatic effect of decentering. The optical center O has been moved toward the base of the vertical prism B A C.

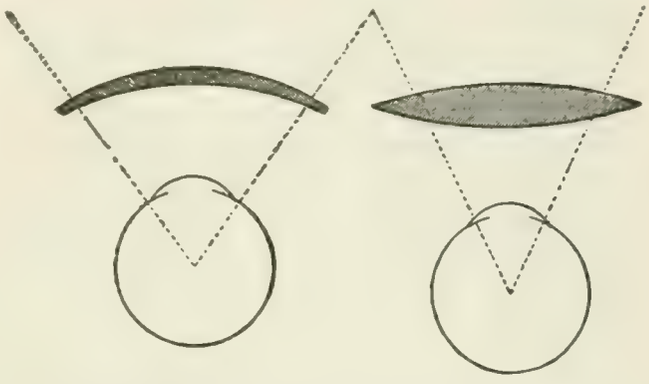
be decentered half the amount that a 1 D. must be decentered to produce the same degree of prismatic effect.

These relations between the dioptric strengths of lenses and the distances they must be decentered to produce given prismatic degrees have all been worked out into a table, which I reproduce here. The strengths of the lenses are, of course, given in diopters; the prismatic effects in prism-angles; the degrees of decentration, in millimeters. Thus, a 1 D. lens must be decentered 9.4 mm. to give 1 degree prism-angle, 18.8 mm. to give 2 degrees prism-angle, and so forth.

TABLE III.*—DECENTERING EQUIVALENT TO A GIVEN REFRACTING ANGLE (INDEX OF REFRACTION, 1.54).

Lens	1°	2°	3°	4°	5°	6°	8°	10°
1 D.	9.4	18.8	28.3	37.7	47.2	56.5	75.8	95.2
2	4.7	9.4	14.1	18.8	23.6	28.2	37.9	47.6
3	3.1	6.3	9.4	12.6	15.7	18.8	25.3	31.7
4	2.3	4.7	7.1	9.4	11.8	14.1	18.9	23.8
5	1.9	3.8	5.7	7.5	9.4	11.3	15.2	19
6	1.6	3.1	4.7	6.3	7.9	9.4	12.6	15.9
7	1.3	2.7	4	5.4	6.7	8.1	10.8	13.5
8	1.2	2.3	3.5	4.7	5.9	7.1	9.5	11.9
9	1	2.1	3.1	4.2	5.2	6.3	8.4	10.5
10	.9	1.9	2.8	3.8	4.7	5.6	7.6	9.5
11	.9	1.7	2.6	3.5	4.3	5.1	6.9	8.7
12	.8	1.6	2.4	3.1	3.9	4.7	6.3	7.9
13	.7	1.4	2.2	2.9	3.6	4.3	5.8	7.3
14	.7	1.3	2	2.7	3.4	4	5.4	6.8
15	.6	1.3	1.9	2.5	3.1	3.8	5.1	6.3
16	.6	1.2	1.8	2.4	3	3.5	4.7	6
17	.6	1.1	1.7	2.2	2.8	3.4	4.5	5.6
18	.5	1	1.6	2.1	2.6	3.1	4.2	5.3
19	.5	1	1.5	2	2.5	3	4	5
20	.5	.9	1.4	1.9	2.4	2.8	3.8	4.8

Next month I shall continue to treat of the mechanical features of fitting the glasses, telling how to adjust the length of the bows, the various features of the



Illustrating the perpendicular axes effect of periscopic lenses.

mountings and bridge, the angle of the crest, and so forth; all of which is a highly important part of the practical application of the principles of refraction.

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[Great interest has been shown in this series by readers of CLINICAL MEDICINE, and we hope that many of the "family" have been impressed by Doctor Atkinson's plea that *doctors* should take up refraction work and put into their own pockets the many dollars that now go into the hands of jewelers, peddlers, and department-store spectacle-fitters. Refraction work is easily learned, it is profitable, and it is a natural part of the physician's work. If you are interested and wish to pursue the matter further, may we suggest that you write directly to Doctor Atkinson, who has a plan for your help. In the Miscellaneous Department, this issue, he has an announcement that should interest you.—ED.]

*Jackson: "Transactions of the American Ophthalmological Society." 1889.

Has Medicine No Curative Properties?

A Plea for Drug Studies

By John M. Shaller, M. D., Cincinnati, Ohio
Author of "A Guide to Dosimetric Medication"

PHYSICIANS sometimes are heard to say that "medicine has no curative properties." Perhaps this is done in imitation of a certain truly great clinician who has been accused of having originated this bold assumption or oracular wisdom. Now, if that phrase does mean anything, it is, that when medicine is given to the sick it does not effect a cure.

Let us first understand what the word curative really means. It means the power to heal, to make well, to restore to health, permanently to relieve such symptoms as are manifest.

We will consider only chronic diseases. Acute diseases are of short duration; often they are self-limited, and, moreover, about seventy-five percent of the patients so afflicted will get well without taking any medicine. These facts make it difficult to ascertain the true value of medicine in the treatment of individual cases belonging to this class.

That seventy-five percent of the patients who have acute diseases will get well without taking medicine, does not, by any means, establish the positive conclusion that medicine is not needed, or that it has no therapeutic value in the treatment of this class of patients.

Aconitine will very greatly modify fever, and, by increasing the secretions in general it assists elimination, curtails and even aborts disease; all of which reduces suffering and brings ease to these patients; thus improving upon nature.

Calomel and a saline laxative used at the beginning of acute diseases unload the gastrointestinal tract, increase gastrointestinal secretions, eliminate poisonous products, and thereby greatly improve the conditions of such patients and certainly bring ease and comfort sooner than by waiting for slower nature to do so.

An emetic, when the stomach is overloaded by putrefying contents that have produced symptoms of autoinfection, often gives prompt relief, followed by improvement, especially during or after a prolonged spree.

Do We Cure Chronic Diseases?

With chronic diseases, it is, however, very different. Many of these patients are sick for months. The tendency to spontaneous healing or to run certain specific periods is not so general. If, therefore, a patient with chronic disease is placed under treatment and begins to show signs of improvement, and then gradually gets well, one is justified in believing that the treatment, no matter what it was, effected a cure. Nor can it be said, as in the case of acute diseases, that the disease ran its course and the patient got well in that way.

Chronic patients frequently go the rounds of physicians and try all kinds of treatment, without improving at all. Finally they fall in with some new doctor and after taking his medicines for a while find that they gradually become well. They have been cured.

Why are these patients cured? Because the symptoms of which they were aware, and of which the doctors and others were aware also, have passed away—they disappeared. The patients consider themselves well, and so does the doctor and he discharges them. Previous to this time, however, neither medicines nor nature had been able to give any relief.

All physicians who have had such patients under their care, no matter what their beliefs were in regard to the curative values of drugs, did, without hesitation, make the claim of having cured them, and also took pay for having cured them. Not one of them said: "I did not cure you, keep your money, you cured yourself; you would have gotten well just as readily if you had never seen me." And the physician is right in making the claim of cure. Why did the patient get well? Because he took this doctor's medicine and advice. This patient began to feel better soon after taking this particular physician's treatment.

There is nothing strange or startling or even incredible about such results after taking medicine. The most startling thing about it is, that at this present-day proof should be needed to show that medicines do cure, and cure because of some special inherent property within themselves. For thousands of years people have observed that appropriate medicine makes them well—not all the time, yet, a sufficient number of times

—just as it does today, to warrant the belief in the medicinal virtues of drugs.

Why Do We Encourage Skepticism?

The most amazing inconsistency on the part of physicians is, that they themselves should raise doubts in the minds of their patients and of the public in general as to the power of medicines to cure. This encouragement of skepticism comes from the fact that certain diseases are not often cured by medicines. Some forms of heart disease, and of kidney affections, mental and socalled nervous conditions, cancer, and tuberculosis may, in general, reasonably be ranked as incurable.

And, yet, there is no doubt that tuberculosis and other ailments classed as incurable occasionally are cured. This fact may be verified, notwithstanding that the medical authorities are reluctant to admit it. This is particularly so with regard to cancer. The incurability of this disease has been so firmly rooted, through long traditional teaching, that it is almost impossible to believe that one single case has ever been cured by medicine. Occasionally there are some brave doctors who cite their cures, with authentic corroborative evidence that can not be successfully contradicted. Even though the percentage of cures may be very small, the fact remains that some patients really are cured. This is not because a specific medicine is given, but, because medicines are well selected to meet specific, individual indications prominent in each patient.

The unfortunate method of prescribing medicine simply because some disease exists, such as rheumatism, is not fair for the patient. There is no one medicine which when given to all patients suffering from acute articular rheumatism in its febrile state will cure all of them. No particular medicine will cure at all times all patients of the same disease, but there are some medicines that will cure some of the patients some of the time. That some medicine will not cure all patients every time, is not so much the fault of medicine as of him who prescribes it. Conditions vary in the same patient during different attacks of the same disease, and these variations necessitate the use of different properly selected and adjusted medicines.

Medicines Do Cure

Salicylic acid will cure the majority of patients suffering from acute articular rheumatism during its febrile period. There are times, however, when colchicum or bryonia will do better. There also are times when neither medicine, nor even nature, can effect a cure.

The chief point to be emphasized is, that medicines can, and do, cure. No matter what Professor Osler says or what other doctors may say about it, medicines do cure because they contain certain inherent curative properties. If I understand the views of those who say medicines do not cure, they mean that nature cures, not the doctor, nor the medicines. On this same principle, foods do not nourish, but it is nature who nourishes. If a man were found at the point of starvation and someone gave him food and thus saved his life, this someone really did not save the man's life; the food did not do it; but it was nature, for nature had to be there to assimilate the food, just as it has to be there to assimilate and appropriate the medicine. You see how plain, how explicit and how very direct this explanation really is.

That surgeons should not be enthusiastic advocates of internal medication would seem quite natural. Their training is such that it leads to the desire for quick results. Expectantly waiting month after month for the slow results of medicine in the treatment of chronic diseases, does not fit into the character of the surgeon, especially not, when one hour's work frequently will remove the cause of disease and produce a cure.

Logically, then, it is the surgeon who might very consistently underestimate the therapeutic values of medicine. He might even affirm that medicines have no curative properties, at least, for him.

Surgical intervention is not always followed by cure, any more than is medication. Surgery often fails even to alleviate, and sometimes it no doubt hastens death, if it does not actually precipitate it. This may, however, be very desirable so far as the patient is concerned, because of severe suffering for which no relief can be promised.

Because surgery does not always cure, and because it sometimes even fails to alleviate or even may be the direct cause of death, some practitioners who confine themselves exclusively to the use of internal medicine aggressively oppose all kind of surgical work. This is absolutely wrong. To condemn surgery because it does not bring relief to all who are operated upon, is just as irrational as to condemn all internal medication because medicine does not cure all who take it.

The Cures Effected by Nature

Nature herself is no less at fault, and she is positively and absolutely less successful than either surgery or medicine.

We frequently hear of the wonderful cures effected by nature. We are told to keep our hands off; to support nature; to wait and follow the expectant plan while nature cures and restores the health that was lost.

There are, perhaps, more than one million people sick with chronic diseases in this country alone. Each one of this large number is sick because nature failed to keep him well and then failed to make him well after he became sick. Each one chronically sick is a conspicuous monument, a living witness to the fact that nature did not cure him. There may be a few in this class whom even the doctors failed to cure.

In the present order of things, all men must die, in spite of nature, of the surgeon, of the doctor, and even of the no-drug practitioner, all of whom are trying their best to prevent about eight hundred thousand people dying each year. This very great number, after they are dead, are absolutely of no assistance to doctors.

When so many die each year, when there are over one million chronically sick, to say nothing about the many who are sick because of acute diseases, and when we consider that all who die do not die of old age, it really seems as if medicine were not so very efficient, after all, and, yet, of the million of patients who are now suffering from the effects of chronic diseases, all of them will not die because of their present diseases, for many of them will get well by taking medicine in which there is some inherent curative property.

In chronic diseases, nature often has years of time in which to effect cures—if she can. Sick people are almost as good judges as are physicians in determining whether they are relieved of their symptoms after a course either of nature or of medicine.

When chronic patients wait for nature to cure them, they still have the advantages of change of scene, with its different climate, of diet, baths, mineral waters, physical exercise, and so on, and, yet, these patients only too often die of their prevailing diseases. Many of them die while waiting for nature to cure them. Nature only too often is a laggard, and much procrastination results in so increasing the lesions that skilled physicians are thereafter prevented from rendering efficient service.

Killing Versus Curing

If a man takes an overdose of digitalis and dies, physicians very naturally, and justly, infer that a disastrous effect—death—followed a cause; in this case, digitalis. When a patient who has dropsy from heart disease takes proper doses of digitalis and becomes well, those physicians who believe that medicines have no curative values are not so eager to infer, and perhaps would even deny, that health—an effect—followed a cause—digitalis. This class of physicians would say that nature performed the cure. This mere hairsplitting or haggling over extremely unimportant detail is only begging the question.

Here is a man who has been sick for some months because of heart disease and he has been becoming gradually worse. Finally he is cured because he took digitalis. The question comes up, Why did not nature cure before digitalis was taken? It certainly could not have been for want of time. There is one very good reason why nature did not cure this patient: it did not have digitalis. Without digitalis, neither nature nor the doctor could have cured this patient. Nature unaided by digitalis could not cause the heart to increase its muscular force, nor produce contraction of the arterioles and thereby augment the pressure within the kidneys, and thus improve the secretion of urine.

It is an extremely false and hazardous assumption to believe that nature is perfect and all sufficient, and that if a patient lets nature have her way he is better cared for and his chances for recovery are greater than when he is in the hands of a good physician.

Nature is not perfect, but it needs a great deal of help at all times. Burbank has demonstrated this many times over. The tendency of plant-life is, to deteriorate when uncared for. Just a small amount of attention, just a little coaxing, all of which is stimulation, not only makes the plant thrive, but it is greatly increased in growth, in beauty, and in production. Animal-life is amenable to similar treatment.

The same rule applies to man himself. Had it not been for the eternal vigilance of the medical man in finding means of cure and of preventing disease, the world would today be depopulated.

Man has improved over nature, in making vaccines in quantity, and in using them more liberally, and opportunely, in order to prevent and to cure diseases. Suppose a doctor should wait for nature to produce a necessary amount of serum when a patient was showing signs of infection, what would become, for example, of a diphtheritic or of a tetanic patient while sufficient protective fluid was being made in the body by superior nature? This illustration surely shows that nature

must be greatly assisted, and even generally so, if patients' lives are to be saved. This at least proves that the doctor is necessary, and does save lives.

While it seems superfluous to offer facts in order to prove the efficacy of medicines, it might be best to give the results in a very extreme condition, which show rapid improvement after the administration of proper remedies.

An Illustrative Case

A man of fifty years of age when first seen by me presented the following array of symptoms: Both legs, feet, and the abdominal walls as far as the lower border of the ribs were all markedly edematous, as were also the penis and scrotum. The pulse was very feeble, irregular, and beat 110 per minute. The bowels were constipated. The amount of urine passed was 4 ounces within twenty-four hours; specific gravity, 1018; but no albumin. This patient had been sitting up in a Morris chair for several weeks, because of dyspnea. The treatment up to this time had been without result and the patient had grown gradually worse.

The treatment now consisted in giving 3 grains of calomel, guarded with opium, three times a day for three days. On the second day, there was a slight increase of urine. This increased from day to day, until by the tenth day from 10 to 14 pints of urine were daily passed. At this rate, the edema soon grew less and gradually disappeared. In the course of several weeks, this patient was able to walk about the house. He made a good recovery, and lived five years thereafter, finally dying of the results of empyema.

Without the administration of calomel or some similar remedy, this patient could not have recovered. It is natural to infer that the great increase in amount of urine, from 4 ounces a day to 14 pints, was caused by the calomel, and that the restoration to health that followed also came as a result of the administration of calomel. In other words, probably plebeian in character, calomel—a medicine—*cured* this patient.

Medicines may generally be classed as being stimulants or as depressants. They can, therefore, either increase or decrease the various functions of the internal organs.

No one can successfully deny that medicines do modify even the normal functions of organs, nor can it be denied that in sickness medicines may modify abnormal functions and ofttimes restore them to the normal.

These effects are brought about through the action of medicines directly upon the nerve-centers. In this way, some medicines increase secretion and motion, while other medicines decrease them.

Upon What Does Success Depend?

Success in getting proper action through medication depends upon one's ability to select those remedies that can produce desired results. Some physicians are very much more successful in obtaining such results than are others, because they are more familiar with the details and with the definite action of drugs in increasing or in decreasing deranged functions, according to the needs of the case in hand.

No doubt failure to cure disease by the administration of medicines is due not so much to a lack of curative properties in medicines themselves, but results rather from an improper selection of remedies that are indicated, and from treating disease as an entity, instead of being definitely guided by the conditions present in each particular patient.

Diseases cannot be rightly treated as a whole. That symptom which is most prominent, most annoying, most greatly concerned in producing serious results should be definitely treated. Medicines should not be given, unless there are definite or specific conditions present for which that medicine is peculiarly and specifically applicable—if not specifically applicable, at least definitely so.

The folly of believing that medicines are without therapeutic values is very positively shown by the curative effect of quinine when given in malarial diseases; of mercury, in syphilis; of salicylic acid, in acute rheumatism; and of colchicum, in gout.

Many a nervous patient has been cured, when the spine was tender, by the administration of phosphide of zinc. Iron, quinine, and strychnine, commonplace as they are, have restored many an invalid to health. A course of saline laxative, of sulphocarbolates, of Waugh's anti-constipation granules have each cured many patients; bryonia has cured chronic pleurisy, cimicifuga has cured muscular pains. And so this idea may be carried through the entire list of drugs.

The probabilities are that each remedy of the many hundred known to physicians has some cures credited to it. If this were not true, as a rule, medicines would not have been listed or recommended as being curative, or at least alleviative.

It seems that the word "cure" is objectionable. According to the highly ethical, a doctor has no right to say that he can cure

disease; he should not make such a claim. The most that he ought to say is, that he treats disease, but, cures—never! Likely he may say, "Yes, but the sun does move, anyway." We may say, just to be very ethical, that nature cures, but, nevertheless, the doctor who gives the medicine is the one who cures. The bullet kills, but the man who shot the bullet is the one who is held responsible.

Large doses of common castor oil or of plebeian epsom salt have saved sick people who were surely passing away from the effects of acute peritonitis. In these cases, improvement was manifest as soon as thorrough evacuation was begun, and recovery often followed very rapidly thereafter.

Why were such results obtained? Because these household-medicines contained curative properties which, when permitted to act at the proper time, stimulated certain functions, which led to changes that resulted in the restoration to health. Of course, there had to be something to work upon; but, without these remedies—there would have been no work.

In many other cases, it is the same as in that of peritonitis: nature is paralyzed, and would remain paralyzed but for the taking of a little medicine that properly stimulates.

Very wise men will quibble and say, that castor oil and epsom salt are, of themselves, without curative properties. Perhaps they are if they remain forever upon the shelves and are never administered. Nature often needs some sort of castor oil, it often cries out for it very strongly; but we, who ought to be able to interpret the call, can not always do so.

Heart Stimulants in Pneumonia

When to Use Them, and When Not to Use Them

By C. W. Canan, B. S., M. D., Orkney Springs, Virginia

FROM the tone of some of the recent papers on the treatment of acute lobar pneumonia, containing reports of long series of cases without a death, it would seem there are men who believe they have discovered a specific treatment. These writers have modified each particular plan of treatment, and improved it, until each believes it as near the right procedure as can be evolved; nevertheless, in the face of all of this, our death rate in the year 1912 was 18 percent, and in 1913, 28 percent.

It is impossible to lay down any specific line of treatment, for each case must be treated according to the condition present. It is easy to talk of aborting pneumonia—and it can be done—but how many cases do you see early enough to do this? The fact remains, however, that in many of the cases that fall under our care, the treatment resolves itself into a desperate fight to keep the patient alive until the disease has spent its severity. In other words, the fight on the doctor's hands is, to keep the heart going until the condition ends either by crisis or by lysis.

Don't Over-stimulate

Before discussing the merits of various heart stimulants, we want to say that, if there is a nice point for the physician to decide in the whole line of treatment, it is to know just when stimulation of the heart is indicated in pneumonia.

One of the things that nature does in this disease is, to stimulate the heart, and she, like the physician, is liable to overstimulate. We must study nature and be ready to arrest her mistakes or to correct them. We believe that more cases of acute lobar pneumonia are lost through overstimulation of the heart than from any other cause.

If you can be with your patient or near enough to watch him closely, aconite is the remedy of choice. Its action on the skin and its power to overcome high arterial tension and to slow up the overacting heart are all in the patient's favor, if these effects are not pushed too far. But do not rely upon the common tincture—use the alkaloid instead.

Our experience through a number of years is, that digitalis is almost worthless in pneumonia. The reason for this we do not know, but the fact remains that digitalis is inert in pneumonia unless used in heroic doses; and this would, or should, preclude its employment here.

It is most important in this disease that the nervous system be wide-awake, particularly the vasomotor system and the cardiac nervous apparatus. In patients who die of pneumonia, it is evident that the cardiac

and respiratory nervous centers have gotten far behind with their work.

We have at our command one drug that will prevent this condition, and that is strychnine. The turning point in this disease depends upon what the nervous system shall be able to do in the control of the circulation. Strychnine keeps these centers awake and watchful, even while the patient sleeps. While we never have adopted it, we believe it good treatment to give this drug in guarded doses throughout the disease.

Cactus, given from the beginning, often will prevent a cardiac breakdown. We have medical friends who rely upon alcohol in one of its forms as their choice of a heart stimulant. In certain patients and certain conditions, it is true, alcohol does good work; however, it is impossible to know this to be so without actual trial.

Lest we forget, we want to state that we believe that more pneumonia patients die because of an engorged portal circulation than from any other cause. It will be found impossible to control the heart action as long as this condition obtains. In severe cases, the heart always is overworked trying to drive blood through a blocked-up lung; to say nothing of the extra strain from a blocked-up portal circulation. Very frequently, under such circumstances, an overworked heart is believed to be an indication for cardiac stimulants.

One Illustrative Case

We call to mind a case of this kind. A man 28 years of age (weight, 145 pounds) contracted double acute lobar pneumonia, and we were called in consultation on the fifth day. The patient's condition was about as follows: Respiration, 36; pulse, 148; temperature, 106° F.; skin, dry; tongue, heavily coated and as dry as a chip. The patient was delirious, picking at the bedding. Abdomen was prominent, lung-tissue over the diseased area was solid, right heart sound was inaudible.

The physician in charge had given the patient up, told the young wife that he had done all he could do. Turning the patient over to us, he took his departure. He had given the patient a hypodermic injection of 1-40 grain of strychnine and 6 minims of tincture of digitalis, just before I arrived. He had prescribed quinine, salol, and spirit of nitrous ether for two days previous. The patient's clothing and bed were soaked with water that had been used trying to reduce the high temperature.

We took charge of the case at 6 p. m. on the fifth day of the attack. We rubbed up thoroughly 10 grains of calomel with 30 grains of powdered ipecac and divided this into 10 powders, and one of these was given every hour until the bowels were cleared. While we were waiting for results, the patient was helped into dry clothing and the wet bedding was removed. Also a cotton-batten jacket lined with silk was snugly fitted on the patient.

The bowels moved six times between the hours of one and five o'clock—and what quantity! No one would think such a mass could be stored in the intestinal tract; and the odor was something fierce. The intestinal-antiseptic tablets were then pushed to effect, and ipecac was given alone every three hours.

The patient was improved in twelve hours, and in twenty-four hours the whole picture was changed: respiration, 26; pulse, 108; temperature, 101° F.; cough, easy; skin, active; tongue, clean and moist; and the patient was conscious. Resolution began at once, and with good nursing the patient made a good recovery. Had heart stimulants alone been used here the patient would have died, without a doubt.

We will report a second case of pneumonia, which we believe typical of an overburdened heart.

Farmer's son, age 17 years; weight, 178 pounds; of ruddy complexion; German descent. It was the sixth day of the attack. Findings; respiration, hurried and shallow; pulse, 130; temperature, 104° F.; cough, dry; kidneys, inactive; patient in acute delirium; skin, dry; lips and face, cyanosed; finger-nails, blue; in fact, the danger-signals were being displayed on every hand. The patient was taking one-half ounce of whisky every three hours, and cactus in between. The physician in attendance said that he had employed the usual treatment of quinine, acetanilid, and purgatives.

We, however, went back to our old standbys—calomel, ipecac, and squills. These were given at short intervals until physiological effect, then followed by intestinal antiseptics, strychnine, and nuclein. While we were waiting for the alteratives to get in their work, we threw open the doors and windows and let the crisp, frosty air blow in on the patient, as we did not have an oxygen-apparatus.

The change for the better was plainly manifest in six hours. As soon as the portal circulation was freed, the heart ceased its

rapid stroke, quieted down, and the cyanosis disappeared. The kidneys began to do their work. The acute delirium improved, but still gave us considerable trouble; however it finally yielded to the bromides and free elimination. The patient made a tedious recovery.

We believe that if there is free elimination, in conjunction with the judicious use of aconitine, conditions such as described above should be obviated.

[In one point we disagree with Dr. Canan. Digitalis, or rather digitalin, used in small repeated doses, together with aconitine or veratrine, steadies and supports the action of the heart, while the defervescent alkaloids relax the grasp of the arterioles. These remedies (veratrine being replaced by strychnine arsenate in asthenic cases) give almost ideal results when properly used. We are in accord with Dr. Canan regarding the portal circulation and intestinal antisepsis.—Ed.]

Some Startling Experiences

In Which Alcoholism Played a Part

By T. D. Crothers, M. D., Hartford, Connecticut

Author of "Inebriety"; Superintendent of the Walnut Lodge Hospital

EVERY physician having a large practice passes through a variety of experiences that are intensely vivid as well as personal; events that never appear in print, and belong to that great undercurrent of life, with its tragedies, romances, successes, and perils, that seldom come to the surface.

That use of alcohol and drugs sends a large army of really good men and women toward the frontier of insanity, and keeps them in that debatable territory, and over which these victims alternately pass and return with a sort of a lurid intensity that words can not describe.

The incidents I am going to describe are so natural and realistic as to be possible of occurrence in almost any circle and condition of life.

Death From Chloroform During Acute Alcoholism

A gentleman of some property, who was engaged in the manufacturing business and the head of a large family, at times drank spirits to excess. At these times his family physician would be called upon, and under the latter's care he always soon recovered. He was a man of good reputation in the community, and these drink-episodes were concealed as far as possible. However, as the years passed by these spells became worse and of longer duration, and eventually were marked by delirium, so that he would require the attention of two or more nurses. After recovery, his remorse was very intense and his expressed determination thereafter to abstain permanently was most emphatic.

It would seem that when he began to drink the most intense indignation and sorrow filled his mind, and he immediately became deluded with the thought that others had tempted him, and also that events in his family-life were responsible for his drinking. On such occasions he was very violent, broke furniture and tried to injure his family. This would last a day or more, then end in a prolonged sleep and slow recovery.

On one occasion, this man was particularly violent, and the family doctor, who ordinarily was able to quiet him, became the object of his intense hatred. He would not permit him to do anything and had to be restrained from harming him. The physician, as a last resort, poured a small amount of chloroform upon a handkerchief and threw it over the patient's face while he was struggling with the attendant, and held it there for a few moments. Suddenly the man relaxed and was dead, to the intense horror of everyone present.

The family and their advisers immediately concluded that the doctor had killed the patient, and they appealed to the coroner to have him arrested. The coroner was greatly confused. Some rival physicians in the neighborhood shook their heads wisely and concluded that the doctor had made a great mistake.

The autopsy revealed an enlarged heart, congested brain, suffused lungs, and a great variety of other lesions, all of which might or might not have been influential in causing the sudden death. An officious lawyer saw the chance to make some money, but with

shrewdness appealed to me and others for advice.

The facts were undisputed, and the only question was, whether the man died directly from chloroform, and whether the quantity employed was poisonous and fatal in amount. There could be no question about the sudden inhalation of chloroform vapors having produced rapid and fatal anesthesia. The brain and nervous system were in a condition to experience shock of any description. Some traumatism might have produced a ruptured artery and sudden death. The violent efforts of those in attendance in holding him down would have done the same thing, so that the sudden inhalation of chloroform vapor was of the nature of a traumatism, suspending vital forces and chemically paralyzing the respiratory centers. The autopsy did not reveal any ruptured arteries, but evidently they were there.

A great deal of literature was accumulated, and the attorney found that there was some obscurity about the case that did not promise much success. The neighboring doctors did not join warmly in the defense of the physician, and an "expert" from a neighboring city displayed a profound ignorance that was quite phenomenal.

I affirmed that administering chloroform in delirious cases by no means was an unusual measure and that under the circumstances the doctor was fully justified in using any measure to restrain the patient. The family, although they had suffered for years from these drink attacks, seemed to think that the doctor was in some way responsible. Eventually the incident closed, and the coroner considered that the matter was settled beyond question.

Morphine Poisoning Kills an Alcoholic

A second incident was that of a periodic drinker, who at times was intensely religious after drinking, went to church, and became the subject of conversion. After leaving church, one night, in a highly ecstatic state, he called upon the family physician, who gave him 1-4 grain of morphine, then urged him to go home. The physician had done this thing before many times, without any bad results following.

This time the man lay down and went to sleep in a woodshed. He was taken up by the police, who decided he was suffering from morphine poisoning. Later he died. The doctor acknowledged to have given him the narcotic, whereupon the family and friends blamed him for killing the man; indeed, one newspaper affirmed that he was the murderer and demanded that he be arrested. The doctor promptly sued the paper for libel, and the charge was dropped after awhile.

In this case, the physicians in the neighborhood joined most heartily with the doctor in defending the latter's use of the morphine. As in the other instance, an officious lawyer sought special advice and expert testimony from all sources, but finally gave it up and announced that he would in the future make a test case of this.

The dose of morphine given was exceedingly small, but its fatal effects were most unusual. Many physicians give morphine in doses of from 1 to 3 grains in the delirium from alcohol, without any untoward effects. In most such cases, morphine is not absorbed, except in small quantities; yet the condition is such that the narcotic may or may not be active. A great many very curious facts are centered about this inquiry which would make the subject of a most interesting paper.

An Injury While Drunk

The third incident occurred under my personal observation. A very warm-hearted, sympathetic physician was treating a woman in the advanced stages of consumption and was giving her all the delicacies he could afford besides frequent attendance. One day, when calling, he saw her partly drunk husband striking her and otherwise abusing her in solicitations that she give him money. The physician was so angry that he rushed in and grabbed the fellow and threw him down on the floor, pounding him on the head to unconsciousness and breaking his thigh-bone. The man passed into a deep comatose state, and the physician, recovering his senses, had him taken to the hospital at once. The doctor appealed to me for help, fearful that the man would die, and that he would be responsible.

In the hospital, the physicians wanted to give the patient strychnine and other drugs. He was placed in a private room, and the limb was properly splinted. The patient was given nothing but water and sulphate of magnesium for three days. The comatose condition lasted for nearly two days, when the man began to recover slowly. Then carefully selected diet in small quantities was given, but no drugs whatever. He slowly emerged from his condition, but did not seem to have any consciousness of how he became hurt. The bone healed properly, and after a month or so in the hospital he was able to

go about. Fortunately there was a blank of memory, which apparently began after he had taken a drink at a certain place and was told that he would never get any more unless he paid for it. This mental blank continued until he found himself in the hospital, several days after the injury.

Two curious facts followed. The wife, who witnessed the assault, began to recover from her sickness and, under the extraordinary care of the physician, was able to go out. After a few months' residence in a sanitarium, she returned home fully restored; while the husband had lost all desire for drink, became a very strong total abstainer, and went to work; and now, two years later, he is a strong, robust man, is entirely changed in his nature and now is very much devoted to his wife.

The doctor declares that this incident aged him several years, and no one realizes that the terrible bruises this poor fellow received and the broken leg were the direct result of an assault.

THE HAND

By Jas. A. DeMoss, M. D.

The mechanism of the hand:
What wrought it, made it, who hath planned
This lively instrument, unique,—
Ye wise men, sages, who will speak?

Tell how it formed and how it grew,
How took its shape and cunning too;
What made it dexterous and exact
In motion, numberless in act?

What prompts by bidding of the mind,
And acts, too, that are not defined,
To spring and serve with strength and grace,
Nor marred by a reluctant trace?

The arch within the palm who laid,
Filled with hot blood the heart conveyed,
Whose generous warmth and feeling grasp
Friendship conceals within its clasp?

Tell how the soul on finger tips
Out to the world in silence slips;
And how the blind may know and see
The world by its new visionry!

Yes, tell us all about the hand,
The what or who created, planned,
And I will bow in reverent mood
Worshipful of its great godhood.

What Others are Doing

IODINE IN DIABETES OF THE AGED

While not exactly latest news, it may not be amiss to refer to a suggestion made within a year by A. Lorand, of Karlsbad, anent the treatment of diabetes in the aged. Lorand, as the readers know, has made a specialty of the study of the internal secretions and, concurrently, of the disabilities of old age. In this way, he tells us (in a contribution to the *Journal des Practiciens*, May, 1913), he "stumbled" upon the value of iodine in the disorder named.

It appears that Lorand prescribed iodine for a 60-year-old man for his marked arterial sclerosis, but was greatly surprised upon finding the sugar disappear from the urine. Later, treating a diabetic women of 55 for a recalcitrant asthma, he again got the same results, as to the urinary glucose, from a course of iodine. Then, in view of these unforeseen results, Lorand consciously applied the iodine therapy in a case of pure senile diabetes, and with the same happy outcome.

This experience prompts Lorand to assume a specific action of the iodine upon the pancreas, and he invites experimentation at large. Calx iodata would seem just the remedy.

BARLOW'S ACUTE RICKETS AND VITAMINIC FOOD QUARTEINS

Once more the theory of deprivation-disease has been substantiated, in this instance in a case of Barlow's disease (acute rickets, infantile scurvy), the subject being an 11-months-old baby suffering from a severe attack, and which was being raised on Swiss milk (condensed, presumably.—Ed.) and oat-meal.

Remembering the former observations of Holst and Froehlich with experimental scurvy (*Ther. Monatsh.*, 1912, p. 675), E. Freise, of the University Clinic for Children at Leipzig, began to administer to this rickety infant the alcoholic extract of sugar-beet (*Monatsschr. f. Kinderh.*, 1914, p. 687), and in the space of seven weeks it was clinically cured; although purposely the inculpated diet was continued exactly as before. A total of 13.8 Grams of exsiccated beet-extract was administered. Repeated Roentgen examinations showed the progressive reparative process in the bony structures.

The startling successes already attained with vitamin therapy in the brief period since its introduction promise, in the opinion of Freise, to afford us a newer and deeper insight into the still unsolved question of the etiology of many forms of pathologic states. In view of all the facts developed, this author makes the suggestion (by the editor of the *Monatsschrift* hailed as a happy one) that these newly discovered vital substances—that is, vitamin, oryzanin, and so on—be called, collectively, "quarteins"; inasmuch as they constitute a fourth group of foodstuffs indispensable to animal life, and supplementary to the carbohydrates, proteids, and fats, the three groups hitherto considered the essential nutrients.

NONOPERATIVE TREATMENT OF CICATRICIAL PYLORIC STENOSIS

When treating pyloric stenosis, the result of scartissue, with fibrolysin, J. V. Kovats, of Budapest (*Med. Klin.*, 1914, p. 457), has made it a practice to direct the patient to drink considerable water with each meal and, upon finishing, to lie down on his right side for forty-five minutes or longer; the idea being, to let the gastric contents assist in dilating the pylorus by their gravitational pressure.

Furthermore, in order to obviate pulmonary or cerebral hemorrhage, through the increased blood pressure caused by the fibrolysin, the author advises constant control of this phase, resorting to venesection the moment the danger-point may be reached.

THE USE OF EMETINE IN CHILDREN

According to De Buys, of New Orleans, (*Merck's Archives*, August, 1914, p. 266), amebic dysentery is relatively rare in children. However, it does occur at this period of life, and seven cases are cited.

Two cases of infantile dysentery are also reported by Captain R. G. Archibald of Khartum (see *Journal of Tropical Medicine*, 1914, No. 11, p. 161). One little English girl, two and one-third years old, having twenty-three passages in twenty-four hours, received 1-8 grain daily for a period of three weeks, the total amounting to 2 1-6 grains of emetine. Her sister, age eight months, having six movements daily, required only four doses of 1-12 grain each to effect a complete cure.

Captain Archibald is of the opinion that children will be found to be very tolerant of emetine, as they are of ipecac. He very wisely recommends that the alkaloid should be used continuously, once a week or once a fortnight, for at least three months after apparent cure.

ALBUMIN MILK — CASEIN-MILK — "EIWEISSMILCH"

The last one of the three terms given in the heading is the German—though in America quite freely adopted—name by which this preparation was introduced by Drs. H. Finkelstein and L. F. Meyer (*Jahrb. f. Kinderh.*, 1910, cxxi, p. 655 and 683) early in 1910.

Inasmuch as the formula for this mother-milk substitute never has appeared in these columns, while its employment in pediatric practice seems to be spreading, the same may find a place here for those interested, although, presumably, many families will prefer the readymade canned article, because of greater convenience. While this is *not* a write-up, we may add that the eminent pediatrist Leo Langstein, of Berlin, gives preference to the original, Finkelstein-Meyer, preparation, saying (*Ther. Monatsh.*, July, p. 483) that the canned article, as sold under guaranty, gives him better satisfaction than extemporaneous mixtures; indeed, it was the unreliability of the latter—owing to faulty technic—that first caused Finkelstein to have it prepared and canned in the laboratory. Incidentally the original directions for making the food were modified more or less, until the final standard was attained. The formula first published was reproduced (among others) in the *Archives of Pediatrics* for August, 1910, as follows:

Heat 1 quart of full milk to 100° F. Add 4 teaspoonfuls of the essence of pepsin and stir. Let this mixture stand at 100° F. until the curd has formed (this usually takes about one-half hour). Filter the whey from the curd by means of a linen cloth, and discard the whey. The curd is then removed from the cloth and pressed through a rather fine sieve two or three times by means of a wooden mallet or spoon. One pint of sterile water is added to the curd during this process. The mixture should now look like milk, and the precipitate must be very finely divided. To this mixture 1 pint of buttermilk is added.

The authors ascribe to the product this composition: albumin, 3 percent; fat, 2.5 percent; sugar, 1.5 percent; ash, 0.5 percent.

In relating his experience with this food (prepared extemporaneously by the nurses), Jules M. Brady, professor of diseases of children, at St. Louis University, states (*Jour. Amer. Med. Asso.*, 1911, p. 1970) that he prepares the buttermilk by inoculating fresh milk with tablets of lactic-acid bacilli; letting the milk stand twenty-four hours and then churning with an egg-beater. He also corroborates Brennemann (*Amer. Jour. Dis. Chil.*, 1911, p. 341), that, following this formula, first boiling the milk facilitates passage of the curds through the hair-sieve. (Metal and wire sieves must not be employed!)

On this, Doctor Brady comments: "One must say that the results with this food approach very near the good results from breast-milk in the various (appropriate) conditions." After a while the nurses overcame technical difficulties and turned out a beautiful mixture; and there no longer is a desire for the imported canned article.

For the essence of pepsin, Brady often substitutes a rennet tablet; the water for rinsing the sieve he first boils, then cools to 100° F.—the same temperature to which he warms the fresh milk. Furthermore, he passes the curds through the sieve from twelve to fifteen times, instead of the few times named in the formula.

Of course, this is not a general food, and the cases must be carefully selected. But that is another phase.

NIEMANN'S MILK MIXTURE FOR INFANTS

More harmful than any other constituent of milk—so far as infants are concerned—are the low-grade, volatile fatty acids of the milk-fats, in the opinion of Niemann, and this investigator has evolved a mixture for a mother-milk substitute designed to overcome that objection. This is his formula:

Butter	Gm. 50
Malt-extract	Gm. 50
Skim-milk	Gm. 500
Decoction of mondamin (5-percent)	Gm. 500

The butter (which must be of the highest grade) is washed by kneading it thoroughly in cold water, changing the latter at least eight or ten times—sufficient to insure the dissolving out of all the objectionable constituents. Then, by proper means, this butter-fat is emulsionized with the other ingredients. In this mixture the child receives a relatively large percentage of fat, more than can be conveyed by means of cows'-milk, while being adapted for those infants not thriving upon the customary milk mixtures rich in carbohydrates, but poor in fats. (Mondamin, by the way, is the fancy name of a favorite German proprietary. It is nothing but corn-meal deprived of its oil.)

Now, however, Langenstein (in his article already quoted in our September issue, page 808) raises objections to this nutrient, both upon theoretic grounds and because of his very unsatisfactory experience with it in practice. The latter, though, was limited.

ADDITIONAL NOTE ON LAROSAN FEEDING

Based upon his experience with larosan feeding (Cf. September, p. 808) in the cases of 19 extremely emaciated infants (ages between four and forty weeks), H. Kamnitzer finds (*Deut. Med. Woch.*, 1914, p. 855) as follows:

All in all, the patients did well under the larosan regimen, and their stools became firm; nevertheless several serious complications and two deaths resulted, so that the author considers it an open question as to whether the Finkelstein albumin-milk is not to be preferred, as a rule.

AUTOINTOXICATION AND SENILITY

Dr. I. L. Nascher, of New York, has a very interesting paper in a recent number of *The New York Medical Journal*, in which he traces the analogy between Lane's autointoxication complex and the manifestations of senility.

As will be remembered by our readers, Lane, in his classical studies of chronic intestinal stasis, mentions seventeen symptoms resulting directly from this condition. Among these symptoms are: loss of fat, wasting of the voluntary and involuntary muscles, degenerative changes in the skin, subnormal temperature, tendency to apathy or melancholy, rheumatic aches and pains in the muscles and joints, wasting of the thyroid gland, increase or decrease of the blood pressure, degenerative changes in the breasts, visceral prolapse, degenerative changes of the heart, derangement of the kidneys, loss or whitening of the hair, and various affections of the pancreas, liver, gall-bladder, eye, and the like.

It is certainly significant, as Doctor Nascher points out, that all these symptoms also occur during senility. While he is not convinced that old age can, by analogy, be ascribed to intestinal autointoxication, there certainly is strong evidence to support the belief that the alimentary canal has much to do with the appearance and the signs of advancing years. This, of course, is the theory of Metchnikoff brought down to date.

It is a significant sign of the times that the medical profession is going back again to the ideas so ably presented years ago by Bouchard. While it hardly is likely that the removal of the bands and kinks interfering with bowel drainage, or even colectomy (as suggested by Metchnikoff before Lane appeared on the scene), may prevent men from growing old, there is no doubt in our mind that careful attention to the toilet of the alimentary canal will delay the senescence which is inevitable for all of us.

The Belgian master Burggraeve recognized the importance of this factor in disease and practiced prophylaxis through the daily use, in his own person, of a laxative saline, thereby providing for effective bowel drainage—and he lived to be nearly one hundred.

We predict that sometime the epigram "A man is as old as his arteries" will be changed to read, "A man is as old as his bowel." Very often, we are sure, degenerated arteries are but the evidence of an overworked and imperfectly functionating alimentary canal.

BACTERIN AND SERUM THERAPY IN SEPTICEMIA

An interesting report of 111 consecutive cases of severe septicemic infection, taken from the records of the Presbyterian Hospital in New York City, is published by A. Campbell Burnham in the May, 1914, number of *The Annals of Surgery*. These cases occurred between 1905 and 1913 and represent those treated by several physicians attached to the hospital staff.

The method of treatment employed has changed considerably during the years in which these cases occurred. For instance, during the earlier part of the period, bacterins were never employed. The cases treated fall

into five groups, as follows: (1) those following abortion of labor; (2) those following infected wounds and abscesses; (3) those associated with osteomyelitis and arthritis; (4) those associated with malignant endocarditis; (5) miscellaneous. The mortality in the entire series of 111 cases was 66.6 percent. However, it should be remembered that many of these patients were already in a desperate condition when they were admitted to the hospital. Many of them were treated before the improved methods now in use had been adopted.

In 50 cases following abortion of labor, there was a mortality of 54 percent, the termination of 2 being unknown. The record of the leukocyte count in these cases was very interesting. The conclusion is that a high leukocyte count usually indicates a complication. Yet, the type of infection had little or no influence upon the number of leukocytes, and the number of these found in the blood is not, apparently, of so much prognostic significance as is usually believed. However, patients doing well under treatment usually show a diminishing leukocyte count, with a diminishing percentage of polynuclear cells.

In this series, antistreptococcic serum or vaccine, or in some instances a combination of both, was administered in 17 cases, with 11 recoveries and 6 deaths—a mortality of 35 percent, as compared with a mortality of 68 percent in the remainder. Burnham quotes his own experience and the statistics of several clinicians, to emphasize the importance of the early administration of the antistreptococcic serum.

While the streptococcus is not present in every instance, the percentage given ranging from 58 to 93, according to various reporters, the serum, nevertheless, is bactericidal and should certainly be given to every patient suffering from puerperal sepsis, without waiting for the bacteriologic diagnosis.

The results obtained in this series were distinctly favorable to the use both of the serum and the bacterin. The results seemed particularly favorable when the serum was given early and followed a little later by the autogenous vaccine, the mortality in all instances being reduced to 33 percent.

The results were equally favorable to the use of serum and bacterins in other classes of septicemia reported by Burnham. Thus, for instance, there were 20 cases following infected wounds and abscesses, with a mortality of 75 percent. Only 4 of these patients received the specific treatment, and in these there was only 1 death—a mortality of 25 percent. Every one of 10 patients having positive blood cultures, and who were not treated with bacterins, died.

Without going into details, it may be said that the death rate was decidedly reduced in all forms of septicemia by recourse to specific methods of treatment.

Doctor Burnham's conclusion is that both the antistreptococcic serum and the bacterin are of great value, the former being especially indicated in the early stages, when its bactericidal powers are most pronounced. Given in sufficient dosage during the period of infection, this serum often will change a systemic bacteremia into a localized infection.

The most efficacious of all is the combined treatment, giving the serum early, followed by the use of autogenous bacterins just as soon as they can be prepared from subcultures. Stock bacterins may, of course, be employed —and their use saves time—but Doctor Burnham believes them inferior to the autogenous.

MILK-SICKNESS

A number of years ago, we published several short papers from physicians reporting their experience with that unusual and rapidly disappearing disease called "milk-sickness" or (in animals) "trembles." In recent years, this ailment has become so uncommon that now many able practitioners question the existence of any such disease.

We now find an article upon this subject in the August, 1914, number of *The Illinois Medical Journal*, written by Dr. A. J. Clay, of Hoopeston, Illinois. Doctor Clay ascribes this disease to the ingestion of eupatorium ageratoides (white sanicle). Frequently this weed is eaten by the animals during the dry season, when the grass is gone and the animals are driven to shady places, where it luxuriates. He was able to produce the disease in two young cattle and one sheep, which were fenced in on a barren lot and compelled to eat the plant, cut fresh at each feeding. Within three days all three of these animals were dead, after presenting the usual symptoms of "trembles."

The disease is produced in human beings by using the milk of cows that have fed upon the eupatorium. Doctor Clay refers to 17 cases seen in four different localities, 9 of which ended fatally. In every instance, the origin of the disease could be traced to the use of milk from cows pastured in localities where the plant grew in large quantities.

After an incubation-period of two to five days, the patient generally shows anorexia, languor and fatigue, followed later by nausea and vomiting, the latter being so intense that usually he is unable to take food or water. After one to three days of prolonged vomiting, a condition of exhaustion sets in, followed by restlessness, mental dulness and partial or complete unconsciousness. There is obstinate constipation, scanty urine, abdominal pain, and at times pain in the calves of the legs, followed by stiffness. Patients often have hiccough, and swallowing is difficult.

There is extreme thirst, a fetid odor from the breath, and marked tremor of the tongue, which as a rule is red, large, and later parched and fissured. The pupillary reaction is sluggish and the conjunctivæ are reddened. First the abdomen is scaphoid, but later tympanites occurs. The patient usually lies on the back, with the head turned sideways and the legs drawn up, knees apart. The skin is cold and clammy, pulse irregular, and temperature subnormal. Generally the blood pressure is low, sometimes falling to 67. Respiration is irregular and of the Cheyne-Stokes type. In some instances, these patients pass into a subacute or chronic state.

The outlook is very grave both in the acute and the subacute attacks. In the acute form, the patients usually die between the second and the ninth day, but occasionally they are sick for weeks or months.

Owing to the active principle of the plant having a marked affinity for alcohol, Doctor Clay believes this to be the best antidote. As a rule, he avoids purgation, rather washing out the lower bowel with a solution of sodium chloride and sodium carbonate, 15 grains of each to the pint; the enemas being repeated every two hours. In subacute cases, castor-oil may be given.

SALVARSAN AND MERCURY IN EARLY SYPHILIS

The safety of salvarsan in the treatment of syphilis seems well demonstrated by Gibbard and Harrison, who, in *The British Medical Journal* (Nov. 22, 1913, p. 1341), state that no deaths or symptoms causing any alarm have followed its use in any of the 3800 injections given at the military hospital at Rochester Row. Out of some thousand injections administered at the Portobello military hospital, Dublin, there has been one death; and, after 6000 injections given by American army surgeons, one death only can be attributed to the salvarsan. In each of these two cases, death followed after the second of two injections given fourteen days apart.

After a careful study of the methods of treatment for early syphilis practiced by themselves and others, the authors have finally come to adopt the following method of treatment:

They begin with an intravenous injection of 0.6 Gram of salvarsan; then give five weekly injections of mercurial cream [The composition is not given, but presumably this is the well-known gray oil.—Ed.]; then a second intravenous injection of 0.6 Gram salvarsan, followed by five more weekly injections; and finally a third intravenous injection of 0.6 Gram salvarsan.

The authors advise beginning treatment as early in the primary stage as possible, insisting upon the patient's receiving not less than three salvarsan and ten mercurial injections in the manner described; and on no account must there be neglect of subsequent observation, both clinical and with a Wassermann test, to make sure that the disease has been eradicated. Do not pronounce a patient cured until he has remained free from all signs of the disease, either clinical or the Wassermann reaction, for at least a year after suspension of treatment in primary cases, and two years in secondary cases.

ELEMENTS INVOLVED IN THE CAUSATION OF CAISSON-DISEASE

The factors determining the production of the pathologic conditions developed in persons under compression or (more often) decompression of the air in which they are confined, as well as the individual ability to resist the same, have been discussed by A. Bornstein, of Hamburg, before the Berliner Physiologische Gesellschaft, and may be summarized as follows (*Berlin. Med. Woch.*, No. 20; cf. *Muench. Med. Woch.*, June 2):

In the first place, the liability to have an attack of caisson-disease (occasionally referred to as tunnel-disease—although this term really should be confined to ankylostomiasis), when the atmospheric pressure is reduced, depends, firstly, upon the saturation and the desaturation of the system with nitrogen; and, secondly, upon the readiness with which the heart [organ] permits gas bubbles to be formed within itself. But the degree of saturation with the gas depends, on its part, essentially upon the "minute-volume" of the heart; and, in addition, upon the insanguination of the heart [the organ in question] as compared with the total blood supply of the

entire body, and also upon the absorption-coefficient of the heart [the organ in question]; the latter, again, being determined principally by the proportion of fatty tissue of that organ.

The foregoing analysis of the situation, according to Bornstein, permits of a complete explanation of all the symptoms encountered in persons subjected to high atmospheric pressure.

IS MALNUTRITION A CAUSE OF PELLAGRA?

Many readers of Clinical Medicine will remember the article upon pellagra, written by Dr. C. S. Pixley and published in our June, 1912, number, in which the belief was expressed that this disease is due to an insufficiency of protein in the food. This theory has received strong support during the last few months through the publication of the investigations of Dr. Joseph Goldberger, of the United States Public Health Service, in Public Health Reports, September 11 and October 23, 1914.

Doctor Goldberger has arrived at the following definite conclusions: (1) that pellagra is not a communicable (neither infectious nor contagious) disease, but that it is essentially of dietary origin; (2) that it is dependent on some yet undetermined fault in a diet in which the animal or leguminous protein component is disproportionately small and the nonleguminous vegetable component disproportionately large; and (3) that no pellagra develops in those who consume a mixed, well-balanced, and varied diet, such, for example, as that furnished by the Government to the enlisted men of the Army, Navy, and Marine Corps.

Goldberger was led to these conclusions through careful study of the cases of pellagra occurring in state institutions in the south, especially in the Georgia State Sanatorium and in an orphanage in Jackson, Miss. It was significant that in neither of these institutions had a single case of pellagra occurred among employees. If the disease were communicable, or were due to the bite of a fly or some other insect common in the locality, then the employees should suffer in about the same proportion as the inmates. As this was not the case, other causes were sought. Investigation showed that the principal point of difference between the condition of the two classes, i. e., inmates and employees, was in the matter of diet.

At both institutions those of the exempt group or groups were found to subsist on a better diet than those of the affected groups.

Furthermore, as Doctor Goldberger succinctly states: "In the diet of those developing pellagra there was noted a disproportionately small amount of meat or other animal protein food, and consequently the vegetable food component, in which corn and sirup were prominent and legumes relatively inconspicuous elements, forms a disproportionately large part of the ration. Although other than this gross defect no fault in the diet is appreciable, the evidence clearly incriminates it as the cause of the pellagra at these institutions. The inference may, therefore, safely be drawn that pellagra is not an infection, but that it is a disease essentially of dietary origin; that is, that it is caused in some way such as, for example, by the absence from the diet of essential vitamines, or possibly, as is suggested by Meyer and Voegtlin's work, by the presence in the vegetable food component of excessive amounts of a poison such as soluble aluminum salts."

The conclusion is that the condition which favors the occurrence of pellagra is similar, at least in some degree, to that producing such other nutritional diseases as, for instance, beri-beri or scurvy. In other words, it is due to a one-sided, or eccentric, diet. The condition causing such dietaries is principally economic, i. e., brought about by a progressive rise in the cost of food. As a result, certain classes of people subsist too largely, especially in winter, on the cheaper cereal, corn, on sirup and molasses, and the readily procurable vegetables and fats. It is true that well-to-do people may suffer from pellagra, but this is usually the result of some eccentricity of taste and such eccentricities are particularly common in the insane, many of whom, because of apathy or indifference, it is difficult to persuade to eat at all. It was this fact which explained to Doctor Goldberger the comparative frequency of pellagra in institutions for those of unsound mind.

What food, then, should be recommended for the prevention and cure of pellagra? Doctor Goldberger says that the patient should be given and urged to take an

abundance of fresh milk, eggs, fresh lean meat, and beans and peas, the latter to be fresh and dried, not canned. In cases presenting marked gastrointestinal symptoms, the diet for a time may be limited to these articles. When there is only moderate gastrointestinal trouble, it is desirable to add, in restricted amounts, such cereals as oatmeal, rice and barley, together with potatoes, onions and fresh vegetables, fresh or dried fruits, and wheat or rye bread or biscuits. So long as symptoms of pellagra are present, he prefers to exclude the corn products from the dietary, not because they are unwholesome or innutritious, but rather because the disease occurs very frequently in association with a diet in which corn and its products form a disproportionately large part. He also discourages the use of molasses, jams or starches in those suffering from, or predisposed to pellagra.

Finally, Doctor Goldberger says that the evidence is daily becoming stronger, that the eventual eradication of pellagra in the south will depend largely on the introduction into the dietary of our common dried legumes. He recommends more general cultivation of beans and peas in this section of the country.

In this connection read the editorial upon pellagra published elsewhere in this number. While the dietetic treatment is no doubt of exceeding importance, there is abundant evidence that the medicinal treatment is of value, and this certainly should not be neglected.

AMEBAS NOW FOUND IN THE TONSILS. ORAL AMEBIASIS AND SYSTEMIC DISEASE

Both pyorrhea and tonsillar disease have for some years been suspected of responsibility for various systemic diseases, including arthritic affections, degenerative diseases of important organs, anemias of obscure origin, and even gastric and intestinal disorders. The discovery by Barrett that the entameba buccalis is apparently the cause of pyorrhea therefore suggested to Smith, Middleton, and Barrett (*Jour. Amer. Med. Asso.*, Nov. 14, p. 1746) the possibility of some cases of tonsillitis or tonsillar hypertrophy being due to the same cause. They accordingly began the study of diseased tonsils. Seventeen tonsils removed by Dr. Ralph Butler of Philadelphia were examined, 5 of these showing motile amebas of the type of entameba buccalis, while in the sixth case an ameboid cell of a different type was found. The tonsils of the 5 persons in whom the typical organisms were demonstrated were all large, with pouting crypts, and they were removed from young persons presenting the usual local and general symptoms of chronic tonsillitis, with irregularly occurring exacerbations.

These findings are particularly interesting and important in view of the close relationship between oral amebiasis and systemic disease, particularly arthritis. The suspicion that the general disease may, in some degree at least, depend upon the presence of amebas in the mouth is strengthened by the discovery of these organisms in the tonsils of four out of six patients suffering from chronic arthritis. Of course it is not demonstrated that this ameba directly causes the systemic disease. As the authors state, there is reason to suspect "an important symbiotic relation between the protozoa and the bacteria" in cases of this character.

However, the administration of emetine, locally and hypodermatically, in cases of arthritis, gave results which certainly should encourage further investigation along these lines. For instance, one patient (Case 6), suffering from chronic arthritis involving the knees, ankles, wrists, elbows, and the small joints of the hands and feet, was found to be suffering from enlargement of the tonsils, with inflammatory symptoms around the crypts. The amebas were readily found in the material withdrawn from the tonsils. At irregular periods this patient had sore throat, and he had suffered from numerous exacerbations, and from a septic thrombophlebitis of the right internal saphenous vein. During one of his acute attacks, while confined to the hospital, he was treated with sodium salicylate and sodium bromide, but without appreciable effect on the arthritic condition. Then he was given 1-6 grain of emetine hydrochloride (through mistake, by the mouth),1-6 grain being ordered thrice daily, Within three days he was entirely free from the redness, swelling and pain in the joints, except in the knees. Within six days his arthritic symptoms had entirely disappeared, although the enlargement of the joints persisted.

In another case (Case 7), the patient suffered from subacute arthritic symptoms involving the joints of the neck, elbows,

wrists, fingers, knees, ankles and toes, continuously for five or six months, with irregular exacerbations throughout this period. This patient had suffered from pyorrhea, and his teeth had been removed, but numerous amebas were found in the pyorrhea pockets. The oral condition was treated locally with emetine hydrochloride, and in addition the drug was administered hypodermatically. Within four days the gingeval suppuration had ceased, the joint symptoms had subsided, and he was able to return to his employment, for which he had previously been incapacitated for some time.

The possibility that various obscure anemias, even pernicious anemia, may be produced by infection of the gums or tonsils with amebas has already been suggested, and several cases are cited in support of this position. In one of these cases treatment with emetine produced surprisingly good results. There was decided improvement in color and a gain of 15 pounds in weight.

These studies open up a new field to emetine therapy. If it can be demonstrated that oral amebiasis stands in a close causal relationship to arthritic and other diseases, then the possibility of benefit in these general infections following the administration of emetine must be considered; and the drug should certainly be given a fair trial, in connection with other indicated remedies, in troublesome cases of this character.

RADIOGRAPHY IN MIKULICZ'S DISEASE

Mikulicz's disease, it may be repeated here, consists in an infiltration and change into lymphoid tissue of the lacrimal and salivary glands, evidenced by swelling. This affection, according to several writers, among them Chinton and Aubineau, the latest to report (*Strahlentherapie,* IV, 2), is amenable to the influence both of Roentgen-rays and radium radiation in small dosage. Of course, only experts should employ these agents. A complete cure is effected within half a year, including that of the general health.

LOCAL ANESTHETIC USED WITH H-M-C IN 1000 MAJOR SURGICAL OPERATIONS

There are so many cases in which general anesthetics are contraindicated, especially when kidney, heart, or bronchial and pulmonary lesions are present, that J. A. Crisler (*Amer. Jour. of Surg.,* July, 1914, p. 110) believes that the physician should hail any safe substitute with delight. In more than 1000 major surgical cases, Doctor Crisler has used the hypodermic injection of hyoscine and morphine, followed by novocain as a local anesthetic. While this combination is not recommended as offering a solution for all the surgeon's anesthetic difficulties, the doctor does believe that it is effective in preventing shock and various harmful influences to the brain and cord.

Three years ago he began to use the H-M-C tablet for general effect, with novocain locally, in goiter operations. In cases where it would have been dangerous to use inhalation anesthesia, he obtained highly gratifying results with this combination. He gradually extended this method into the domain of abdominal surgery, and his results were so pleasing that this practice has almost become a routine with him.

His plan of procedure is as follows: Two hours before the patient should go on the table he is given an injection of morphine 1-4 grain and hyoscine 1-100 grain. This is repeated one hour before and again thirty minutes before operation actually begins. This places the patient in a semicomatose condition from which he can easily be aroused. This, says Doctor Crisler, is an important point to keep in mind, since in subsequent handling of the patient great care should be exercised not to disturb him, either by noise or other interference which would cause him to awake.

At the time of operation, a 2-per cent solution of novocain is injected into the line of incision. Five or six minutes later an incision can be made through the skin and down to the fascia without pain or disturbance of the patient. He then throws some of the solution under the fascia, into the muscles, and as these are separated, he gradually introduces a small quantity into the peritoneum. After entering the peritoneal cavity, some of the solution is injected around the pathological tissue to be removed. In this way the operation can be made quite free from pain and shock, and without any inhalation anesthesia whatever in the majority of cases. However, when the surrounding tissues are violently inflamed, as around pus tubes or a gangrenous appendix, there may be evidence of pain, and occasionally some re-

sistance on the part of the patient, requiring resort to ether or nitrous-oxide gas.

Doctor Crisler says that in none of his cases has he seen any idiosyncrasy to the use of hyoscine. In about 25 per cent he has found it necessary to give a few whiffs of ether or a little of the nitrous-oxide gas.

The advantages claimed for this method are: (1) Less fear of the anesthetic; (2) less nausea after operation; (3) diminished liability to irritation of the kidneys; (4) no tendency to irritate the bronchial mucous membrane; (5) less likelihood of irritation or degeneration of the liver cells.

The one disadvantage of the method is the longer time necessary to perform the operation, since the patient must be exactly right at the beginning, and the local anesthetic must be employed several times during the operation, when the various layers of tissue are exposed. However, Doctor Crisler declares that time does not weigh very heavily against its important advantages, unless in the hands of a surgeon who is too busy to respect his patient's welfare.

AN ARSENOBENZOL COMBINATION

Although starting from Ehrlich's original work in arsenical chemotherapy, Danysz (*Ann. d. l'Inst. Pasteur,* Mar., 1914) tells how he proceeded independently on these lines, and finally arrived at a combination of the bromide of silver with dioxydiaminoarsenobenzol for the treatment of trypanosomiasis and syphilis; his thought being to fortify the arsenical compound by the silver, each element acting in its way without individually overwhelming the infected host. Thus far he had treated 80 syphilities, and the results were promising.

CAN THE SURGEON CURE VALVULAR DISEASE OF THE HEART?

In the July number of the *Annals of Surgery* (page 1), Alexis Carrel of the Rockefeller Institute (now serving in the French army) describes some animal experiments which give promise of the eventual mastery of a class of diseases now thought incurable, i. e., the organic diseases of the heart. These operations were performed upon the pulmonary and aortic orifices, dogs being used as experimental animals.

Before beginning operation it was of course necessary to arrest the circulation completely. This was accomplished by clamping the pedicle of the heart *en masse* with large forceps, the jaws of which were covered with rubber. The heart was not taken out of the pericardium, but an incision was made in this membrane just large enough to admit under the pedicle one of the jaws of the forceps. Great care was taken to see that the position of the forceps was exactly right with a view to rapid subsequent performance of the surgical operation, so that not a second should be wasted.

After perfecting the technic, it was found possible to keep the pedicle of the heart clamped for 2 1-2 or 3 minutes without any subsequent trouble in restoration of its function. As soon as the clamp was removed, the heart would resume its pulsation, and after a short time this would again become normal. Two and a half minutes, says Doctor Carrel, appears to be a sufficient time for the performance of several operations upon the valves.

The aortic and pulmonary orifices were exposed by means of an incision made through the anterior wall of the great arteries at the level of or just a little above their junction with the heart. The incisions were made with scissors of unequal blades, one of the blades being sharper and longer than the other, thus permitting of the perforation of the wall of the artery or heart before cutting.

The opening of the ventricles or of the pulmonary artery and the aorta is always followed by entrance of air into the heart. This is a source of danger, since when the circulation is reestablished, air emboli are likely to be sent through the coronary vessels, resulting in fibrillary contractions of the heart and consequent death. To prevent this accident, the air is aspirated by means of a large needle or cannula, introduced into the ventricle or into the aorta and connected with a vacuum apparatus. Such aspiration is rapidly performed just before the removal of the clamp and the reestablishment of the circulation.

Several operations were performed by Carrel upon the valves and vessels; for instance, the sigmoid valves of the aorta were exposed and cauterized, and the pulmonary orifice was cut after the wall had been patched with a piece of vessel preserved in cold storage. These interesting operations are described in detail in Carrel's paper.

Of special interest is the relatively slight mortality following these operations. Doctor Carrel says that in eight cases the pul-

monary orifice was incised and patched. Six of the dogs survived the operation. One died of pericarditis, probably due to handling the heart without rubber gloves; the other dog died on the operation table of fibrillary contraction of the heart, this being due to an error of technic. In the six remaining cases, the animals sustained no shock, recovered completely from the operation, and six months afterward were still in good health. In two cases, due to operative errors, there was a marked diastolic murmur present a few weeks after operation. However, these murmurs disappeared after five months.

Three animals had their sigmoid valves opened, exposed and sutured, and all of these animals recovered, and none of them sustained a perceptible shock during the operation; in fact, in the afternoon of the day of operation they were all entirely normal, and twenty-five days afterward they were said to be in excellent condition.

A NEW METHOD OF USING RADIUM

An ingenious method of making applications of radium to inoperable tumors, is described by Walter C. Stevenson, in *The British Medical Journal* of July 4, 1914 (p. 9). It consists in the introduction of small quantities of radium within the caliber of hypodermic needles, which are subsequently plunged into the body of the tumor. The radium may be enclosed in small glass capillary tubes, the latter being pushed into the needle canal. Five or six, or more or less of these needles may be inserted into the body of any tumor.

Two interesting cases are described. One was an inoperable malignant tumor of the parotid gland. Five needles, charged with the radium as described, were driven into this body. These contained altogether 5.08 millicuries of radium emanation. At the first sitting they were left in place an hour and a half. At the next treatment the quantity of emanation was reduced, the average employed being 4.8 millicuries. Apparently daily treatments were given, the total treatment consisting of 37 1-2 hours of application. At the end of the course of treatment the size of the tumor was greatly reduced and the condition of the patient much improved in every way.

The second case described was one of excessive scar formation on the wrist following a burned and lacerated wound received five years before. The wrist and fingers were fixed in a flexed position and the whole hand was quite rigid. Six needles were inserted into the scar tissue as already described, these needles containing a total average of about 5.5 millicuries of radium emanation. After five days the scar was soft and the wrist could be straightened, while the thumb and finger could be flexed to a considerable extent. Doctor Stevenson declares that the results obtained in other cases under treatment were also encouraging.

FOOT AND MOUTH DISEASE IN MAN

The prevalance of foot and mouth disease in the middle west (see editorial, this issue) gives special interest to cases of this ailment occurring in human beings. Through the newspapers we learn that one such case has already been reported in an Ohio town. Fortunately, it is unusual for human beings to be attacked with it. A case believed to be one of foot and mouth disease, occurring in a British soldier, 19 years of age, is described by Vernon Whitby, of the British Army, in *The British Medical Journal,* July 4, 1914 (p. 11). Lieutenant Whitby describes this case as follows:

"The patient was a soldier aged 19, who gave no history of any previous illness. At Kilworth Camp, on March 17, while carrying some boiling water, he fell and scalded his left wrist; later an open septic wound developed. On March 26—that is, nine days after receipt of the injury—he became aware of burning sensation in the mouth and on the hands, quickly followed by the formation of blisters. He was admitted to hospital on the same day. On the following day his face was flushed and rather congested, the temperature was 101 degrees, the pulse, 100, the lips were swollen, and there was a marked vesicular eruption, rapidly becoming pustular, all over the buccal mucous membrane. There was difficulty and pain on protrusion of the tongue, which was coated, and on which a few vesicles were seen. The breath was very fetid, salivation free, and the speech thick; the nasal and conjunctival mucous membranes were clear.

"There was a well-marked vesicular eruption on both forearms, wrists, and hands, extending between the fingers and to the sides of the nails; the palms were most

affected; the feet were also implicated, but not to such a marked degree. The eruption was primarily vesicular; the vesicles varied in size from that of a mustard seed to a sixpenny piece, were situated on a hyperemic base about one-eighth of an inch in width, showing no tendency to coalesce; they were larger on the forearm than elsewhere. They caused a burning sensation, and were tender on pressure; no itching. The bowels were constipated; otherwise there were no other gastrointestinal symptoms. The heart, lungs, and abdomen normal. All superficial reflexes were very brisk.

"During the next three days the rash became more pronounced; a few isolated vesicles appeared on the face, neck, abdomen, and thighs. The mouth was very sore, the vesicles having coalesced, ruptured, and given rise to shallow ulcers, with yellow sloughy bases, the mucous membrane of the lips had the appearance of one continuous yellow slough, the margins of the lips were crusty and dry; there was no excessive secretion of saliva. There was great difficulty in taking fluid nourishment, but no pain on swallowing. The vesicles on the extremities showed no tendency to pustulate, and there was no involvement of lymphatic glands. Serum from the vesicles revealed no organisms; a few polymorphs were found. There was no leucocytosis; eosinophilia was present to the extent of 10 per cent. The urine was high colored, acid, specific gravity 1027, cloud of albumin, no deposit, *nil* microscopically.

"The temperature, which had remained at 101 degrees, fell on the sixth day, to continue normal."

In this instance the disease was believed to be contracted from a stray collie dog.

INTESTINAL ANTISEPSIS WITH THE BACILLUS BULGARICUS

In discussing the use of biologic remedies in the treatment of intestinal toxemia, as advised by Metchnikoff, Bond Snow (*Medical Record,* Aug. 8, 1914, p. 233) praises highly the use of bacillus bulgaricus, which he declares has the following qualifications for use as an intestinal antiseptic: (1) It produces the greatest amount of lactic acid of any known lactic-acid-producing microorganism; (2) it is resistant to external influences so as not easily to be destroyed; (3) it readily withstands digestion and therefore passes the stomach unharmed; (4) it will implant itself and readily grow in the intestines, continuing there viable and reproducing itself several weeks after the last ingestion; (5) the bacillus bulgaricus is always nonpathogenic, causing neither general nor local injury to man at any age; the antagonism of the bacillus bulgaricus to all putrefactive indologenous microorganisms (which demand an alkaline or neutral medium for their development) is twofold: (a) it generates nascent lactic acid from sugars and carbohydrates, and (b) as Belonowsky of the Pasteur Institute so conclusively has proven, it also produces some form of an enzyme (the exact nature of which is yet to be determined) which also inhibits the growth and destroys the bacteria of putrefaction.

Doctor Snow properly emphasizes the importance of the use of cultures of the bacillus bulgaricus which are known to be pure, fresh, viable, and of high bacterial count. He declares that the persistent use of such cultures, taken before meals and at bedtime, when combined with proper diet, will accomplish more to overcome autointoxication than any line of treatment heretofore attempted, not even excepting the various surgical measures advocated by Arbuthnot Lane.

With Doctor Snow's conclusions we are in the main in complete accord, although we are convinced, by our own experience and by the reports of many practitioners, that best results can be obtained in the treatment of intestinal autointoxication through, first, primary "cleaning out" of the intestinal canal with proper laxatives, such as calomel and the daily morning dose of a laxative saline; thorough "cleaning up" with such intestinal antiseptics as the sulphocarbolates. After such preliminary treatment, the best possible results are obtained by the prolonged and thorough use of the bacillus bulgaricus, as advised by Doctor Snow.

THE TREATMENT OF HEMOPTYSIS

In recent numbers of CLINICAL MEDICINE we have had considerable to say about the use of emetine in the treatment of hemorrhage from the lungs. Results following the use of hypodermic injections of from 1-2 to 1 grain of the hydrochloride of this alkaloid have been so remarkable as sometimes to be properly called "miraculous."

However, the physician should not lose sight of other treatment. As N. B. Burns points out in *The Boston Medical and Surgical Journal,* September 17, 1914 (p. 437), there are four distinct indications when hemorrhage is present, these being: (1) absolute rest, the patient surrendering all effort to those in attendance; (2) immediate lowering of the blood pressure; (3) withdrawal of blood to other parts of the body than the lungs; and (4) the positive assurance to the patient that he is in no danger, in order to relieve the mental anxiety.

To accomplish the first indication, the patient is placed in a semirecumbent position, usually flat on his back, with a curved basin at the side of the face to receive the expectorate. At the same time, to meet indication No. 4, the physician quietly encourages the patient, telling him that very few patients ever die as a direct result of hemorrhage, and that he will suffer no serious consequences, provided he obeys instructions implicitly. This advice is based upon the experience at the North Reading (Mass.) State Sanatorium, in which only ten patients have died of hemorrhage since the institution was opened in 1909. In these ten cases death came so quickly that there was no time for treatment to have effect.

To lower the blood pressure, Dr. Burns advises the hypodermic administration of 1-100 grain nitroglycerin (glonoin). An ice pack is placed on the chest, and cracked ice is given by the mouth for a few minutes. He emphatically opposes the routine use of morphine in cases of hemoptysis. He believes that far better results are obtained by opening the intestinal tract freely with magnesium sulphate in full doses, providing of course there are no contraindications, such as extreme asthenia, enteritis, or ulceration of the bowel. No solid food is to be given for some hours after the initial attack, but cold milk, or cold bouillon, to be taken in small amount at regular intervals. A little lime water is added to the milk to increase its digestibility and add to the body's calcium content. The most popular foods with his patients are the cold bouillon, cold gruel, and malted milk. If cough is present and aggravating, it may be relieved with small doses of codeine or heroin.

To prevent recurrences of the hemorrhage, Doctor Burns advises the administration of sodium nitrite and calcium sulphide, 1 grain of each at three- or four-hour intervals, these drugs to be continued for 24 to 48 hours. Subsidence of the blood streaks in the expectorate, as well as the occurrence of severe headache, call for the discontinuance of the sodium nitrite.

The patient should be kept in bed for an entire week after the blood has completely disappeared from the sputum. Doctor Burns lays special emphasis upon the importance of constipation as a factor in hemorrhagic cases. Relief of this symptom shortens the hemorrhage. The persistence of constipation is not infrequently evidenced by pain in the chest, streaked sputum, and a general feeling of malaise. When these are present, resort to a laxative is desirable.

The advice given by Doctor Burns is certainly excellent and should be carefully considered by every physician called upon to treat a case of pulmonary hemorrhage. We advise, however, the conjoint use of injections of emetine hydrochloride in these cases. There is no contraindication to its use with the other remedies, medicinal and dietetic, advocated by Doctor Burns.

THE CAUSE AND CURE OF PYORRHEA ALVEOLARIS—MORE ABOUT BASS'S WORK

Last month, on page 1000 of this journal, we printed a portion of an editorial in *The New Orleans Medical and Surgical Journal,* in which reference was made to the work of Bass and Johns of the Tulane College of Medicine, in New Orleans. These investigators have verified the discoveries of Barrett and Smith of Philadelphia relative to the cause of pyorrhea and its cure. The complete article of Bass and Johns, with the discussion, is publishd in the November number of *The New Orleans Medical and Surgical Journal* (p. 455-456). These gentlemen have identified the organism found in pyorrhea as the *entamœba buccalis.* After a brief introduction, giving the history of this organism and describing the relation of amebæ to other diseases, the authors report the results of their own investigations, as follows:

"We have examined material from the lesions in 87 cases of pyorrhea, and have found amebæ in 85 of them. One of the negative reports was based upon a single slide, prepared at a distance from the laboratory, from the gum of a woman patient who was convalescing from plague. Pus could be squeezed from her gums, and the diagnosis of pyorrhea alveolaris seemed indicated.

It may be possible that other preparations from other teeth would have shown amebæ. The other negative case was that of a 13-year-old child with acute gingivitis, involving all the gums, of about eight days' duration. Thorough search failed to show amebæ, and we now believe this probably was not a case of pyorrhea alevolaris, or Riggs' disease.

"In addition to the 86 cases in which the disease was either diagnosed by dentists or was so advanced that no mistake could be made, we have made more than a hundred examinations from apparently normal gums and teeth, either in the mouths of patients who had the disease involving other teeth, or in people who appeared to have normal gum margins. We have not been able to find amebæ in a single such instance. We have, however, found them on several occasions in instances where the gum margin appeared inflamed and diseased, but the best that we could determine the disease did not extend to the alveolar margin. Such cases, perhaps, could not be called pyorrhea alveolaris, but they are probably the beginning of the disease. In several instances we have found amebæ in similarly mildly inflamed and 'easy to bleed' gum margins of one or more teeth in patients who had well-advanced Riggs' disease around other teeth. We have found amebæ around teeth in what we have considered to be all the different stages of the disease in the same case, from the slight redness at the gum margin and tendency to bleed easily to the tooth hanging loose in its socket or standing, entirely stripped of gum, on the exposed carious bone.

"The technic of examining for the amebæ is very simple. Remember that they are most numerous in the bottom of the lesion. A little material is removed with a suitable instrument (a good toothpick serves the purpose well), diluted on a slide with a little salt solution, saliva (patient's) or water. A cover glass is placed on the diluted material, which should be examined promptly with the high dry lens of the ordinary microscope. By careful search amebæ are found, showing the characteristic ameboid motion. We are not prepared at this time to say whether there is more than one species to be found. The amebae we have seen vary in size from about that of a leucocyte to about three or four times this size. No contractile vacuole is recognized, but nutritive particles, more refractile and more prominent in appearance, are observed. The ectosarc is quite clear and is well differentiated from the endosarc.

"These amebæ are easily demonstrated in stained specimens. A good method is to make a thin spread of the scrapings and pus from the bottom of the lesion on a slide, allow it to air dry, fix with heat and stain with carbol-fuchsin about one-fourth minute, wash, stain with Loeffler's methylene blue about one-half minute, wash, dry, and examine. The amebæ are well stained by this method, and show their inclusions of tissue or cell remains, indicating pathogenicity. We have been unable to demonstrate that these amebæ take up bacteria, though they sometimes appear to do so.

"Ipecac has been employed with success in the treatment of amebic dysentery for many years, but on account of its nauseating effect and sometimes impossibility for patients to retain it in sufficiently large doses, there has been more or less dissatisfaction in its use. Vedder found that fluid extract of ipecac was destructive to cultural amebæ in solutions of 1 to 200,000. Rogers experimented with the active principle of ipecac, emetine, and found that it would kill entamebæ in stools in solutions of 1 to 100,000, and in 1912 began using it hypodermically in the treatment of amebic dysentery. It is now very generally employed in this manner for this purpose, and with fairly uniform results. The action of emetine in amebic dysentery is very prompt, striking, and specific. Usually the entameba cannot be found in the discharges after twenty-four to forty-eight hours of treatment, and the bloody mucous stools give place to normal, formed stools in three or four days. There is considerable tendency to relapse after the treatment has been discontinued for a time, but no doubt a considerable number of 'relapses' are, in fact, reinfections.

"We have not tried the injection of solutions of emetine into the gum and pus pockets, as Barrett and Smith did, because it has not seemed to us reasonably probable that all the diseased tissues could be reached in this way. Whenever a patient has advanced Riggs' disease in one or more teeth, the disease also exists around and between many of the other teeth. The interdental tissue is often soft, spongy, and bleeds readily. Often simply sucking the teeth causes bleeding. Careful examination reveals active motile amebæ present.

"The results of our experiments, so far, are most gratifying. We have had 68 cases

under observation and treatment from two days to two weeks. The doses of emetine experimented with have been from one-half to one grain. Only one dose was given in a day. Several cases have been given a dose daily for several days. Others were given one or more doses until the amebæ disappeared, after which an interval was allowed to determine how long it would be before they would return, or what other results could be observed. In several instances no amebæ could be found the next day after the first dose was given. In a few, however, they were found the next day after emetine had been given on two successive days. In no case have we been able to find amebæ the next day after emetine had been given on three successive days.

"As to the duration of the absence of demonstrable amebæ following the three (or less) doses of emetine, our studies have not been conducted long enough to determine. In one instance we found amebæ on the fourth day after the last emetine had been given. In another instance we found them on the sixth day. In several instances none could be found after seven days or longer intermission of treatment. On account of the wide distribution of this ameba in nature and the character of the lesions of the disease, we do not think it very likely that bad cases of pyorrhea alveolaris will be permanently disinfected by a few doses of emetine given during a few days. The chances of reinfection are so great and the damaged gum, alveolar and tooth structure offer such favorable soil, that it must surely be necessary to continue the specific treatment until Nature has had time to fully heal the disease.

"The length of time necessary for this will no doubt depend upon many factors. Healing and repair of diseased bone is always slow. Whenever the disease involves only the gum, and has not reached the bone (alveolar structure), it is our impression from observances so far made, that probably the length of time necessary for the gum to heal will not exceed a week. We have observed great change in forty-eight hours, and gums that bleed easily often become perfectly normal in this regard in from twenty-four to seventy-two hours. The results are so striking that there is no doubt in the mind of the doctor or the patient.

"Our experiments have not advanced sufficiently to enable us to lay down dogmatic rules as to the treatment, but we are certain that rapid and favorable results may be expected to follow the administration of 1-2 grain of emetine hydrochloride hypodermatically (in any part of the body) daily for three or four days. In all except the early, mild cases it may be necessary to repeat the treatment, during one or more days, after an interval of three to ten days. In the worst cases no doubt it will be found necessary to reepat the treatment several times before the disease is entirely well. No doubt removal of tartar, scales and other local dental treatment should also be done at the same time.

"It is quite likely that the injection of a weak solution of emetine, one-half per cent, as used by Barrett, into such lesions as can be reached by it, will be found to favor success from the hypodermic treatment with emetine."

THIOSINAMIN USEFUL IN PYLORIC STRICTURE

"In recent years," says Albert Bernheim in *The Inter-State Medical Journal* (Sept., 1914, p. 1027), "It has become almost an axiom that obstructions of the pylorus and duodenum must come under the surgical knife." That surgical intervention is not invariably necessary when the obstruction is of a benign character, is the text for Doctor Bernheim's remarks. He has secured particularly good results in a number of cases by the use of thiosinamine, which may be administered subcutaneously in any part of the body found most convenient. It is not necessary for the patient to be confined to his bed or give up his or her occupation.

He gives the history of four cases of benign pyloric or duodenal obstruction in which this remedy was used with good results. Apparently 1-2 grain was administered at each sitting, and the injections were usually repeated every two or three days. They cause some pain, and this may last for two or three hours. In every one of the cases reported there was symptomatic cure, with digestive improvement and gain of weight.

The power of thiosinamin to remove scar tissue is so marked that we wonder more physicians do not give it a trial. It has even been used with alleged success in treating stenosis of the cardiac valves. We should like to hear from readers of CLINICAL MEDICINE who have employed it for any purpose.

Miscellaneous Articles

Dispensing Versus Prescribing

THE first prescription I can find any record of was given in the Garden of Eden. People were subject to diseases in those days, the same as now, and were cranky and grouchy, just the same as we occasionally are in this civilized (barbarous) age, and made mistakes just the same.

After a strenuous day's work Adam came home very tired. Eve had done her week's washing, dressed and cared for the children, and was cross and peevish. After all that, the evening meal was prepared for the Lord of the Garden. Adam ate heartily and in the night was taken with pains and cramps in the northeast corner of the abdomen. A physician was called. After duly looking the case over, the doctor, being a close observer of man, noticed that there was a strained relation subsisting between Adam and Eve. So he wrote the following prescription:

Love-apple seeds.....no. 20
Seeds of the poppy.....grs. 5
Make an infusion with spring water..... q. s.

Sig: Take 2 ounces hot, for both, until pleasant relations are established in the household and Adam is free from pain.

The prescription was sent to the leading druggist, a. R. P. with a state license. When the apothecary was asked whether he could fill it or not, he said: "Yes, certainly. Do you not see the R. P. after my name? I have the drugs, all perfectly pure and reliable. Please take a seat; ready for you in a very few minutes. Here's the national druggist's paper. You see my name is at the head of the contributors' column."

In due course of time the medicine was compounded, taken home, and finally it was administered to the patient as directed.

After three or four doses had been taken Adam became much worse, cross and fault-finding, and poor Eve became hysterical, disheartened, and fell to nagging; but she, like a good nurse and wife, continued to give and take the medicine until morning. Doctor was again called, made a careful examination of the medicine and concluded there had been a mistake made. So he had the decoction analyzed by the best chemist that resided in the Garden. The report from said chemist was this: The prescription reads:

Discord-apple seeds.....no. 20
Podophyllum.....grs. 10
Make an infusion.

The ultimate results: Discord in the world has been rampant ever since. Men quarreling with their wives, and wives nagging their husbands; and a continual dissension has ever existed as to which is to rule. Nation has contended against nation, and will so continue until all men come under the control of the Great Physician and take and use his prescriptions. Please note that it was all the fault of the R. P., i. e., the compounding druggist!

If the physician in this case had been in the habit of carrying and dispensing his own drugs, he would have had apple seeds, duly labeled, and prepared the medicine under his own observation. Result: the whole world would be at peace and living in harmony and friendship!

Dispense medicine? Why not? It has been done from time beyond date, and I can see no reason why it should not continue *ad infinitum*. If you will take note, the death rate is just about the same as it has been since nations began to note the death rate of its people.

Be sure you know what you are giving. At the present time there are so many reputable manufacturers of drugs, tablets, and tinctures, there is no trouble in getting pure, unadulterated drugs. We must have confidence in the manufacturer. No reputable manufacturing house can afford to permit material to pass out of its house that is below standard in purity.

Because physicians do not always get the results desired and expected from medicine given or prescribed, it does not indicate that the drugs used are not pure. Absorption cannot always be obtained when giving medicine by mouth. The stomach has a laboratory of its own, which in its compounding may completely change the character of the mixture or make it completely inert. At different times, medicines do not always produce the same results, and the action varies in different individuals. If it were not so, we would not have to treat patients empirically.

You must have confidence in the source from which you procure your material. Have you perfect confidence in the average druggist? Druggists' journals have made the assertion that the pharmaceutical manufacturers of tablets and tinctures use old and inert crude drugs. As the apothecaries and manufacturers obtain the crude material from the same sources, by what right can the one call the other dishonest?

The doctor is as clever and clean in handling medicine as is the apothecary. Examine and see. Doctors are poor penmen. That is proverbial. They write prescriptions mostly in hieroglyphics, and only the ablest experts can decipher their scrawls, and what they cannot correctly make out they guess at. There is no valid excuse for such penmanship. If physicians made it a practice to dispense their own drugs, there would be much less blundering. I give here some of my personal experiences with druggists.

A patient of mine went to a drugstore to call me by 'phone. My office was five or six miles from the place. The druggist remarked to this gentleman: "Why send so far for a doctor when there are three or four right in this building?"

Answer: "Because we know him, and he is well acquainted in our family, and if he is on earth we want him."

Now, do you think I should be very anxious to send my prescriptions to that druggist? What business was it of his as to how far away the physician was? He was "barking" for doctors who officed on the floor above his store.

Another case: I had occasion to prescribe for a patient, and wrote a prescription which was taken to a drugstore near to the residence of the patient. The druggist looked over the prescription and grunted: "Ahem! pretty strong medicine, sure of your doctor? Hum, hum."

This gentleman replied: "He has been our family physician for ten or more years, and *we are all living*." Then he asked to see the prescription, pocketed it, and went to another druggist, who put it up without comment. Result: Two months after that, one of the family had a run of typhoid fever. All physicians know about the time required to get through a severe case of that fever. Well, I handled the case, using medicine in the form of tablets and granules, and at the end of four weeks discharged the patient in a fine convalescing condition and he was soon back to his daily vocation, well and sound.

What did the druggist lose by trying to frighten my patient so that he would employ a physician with office over his drugstore? Also, how much did the patient save in money through the tablet treatment? The patient's stomach received the minimum amount of medicine required, and no nasty, nauseating decoctions likely to upset the stomach were given, and there was no occasion for the patient to say: "I would rather die than be obliged to continue taking such vile stuff."

Still another case: I wrote two prescriptions for a child. The first was: Tinct. ferri chlor. Directions: Five drops in water every four hours. The second contained, tincture aconite, tincture gelsemium, spirit nitrous ether, and water. Directions: Teaspoonful every two hours.

The druggist put the label for the iron drops on the bottle for the fever compound, and the label for the fever medicine on the iron bottle. Imagine the excitement after the first dose of the iron was taken. Child screaming, household in consternation and a hurried call for the doctor. The iron was given *undiluted*.

Another case. I was huriedly called to see a patient, in the night, suffering from a scalded mouth from just another such blunder. Two prescriptions had been given the patient, put up in 1-ounce bottles, one for strong ammonia water, the other for a fever mixture; bottles same size, color the same, but directions different. Direction for fever mixture: Teaspoonful every two hours; for the ammonia, a few drops in water for local application. Attendant gave patient a teaspoonful of the ammonia as directed. Result: mucous membrane of mouth and throat badly burned, and a

change of doctor and druggist. That was supposed to be a *careful* druggist!

Again. A patient was given a prescription containing calomel to be put up in capsules. After the patient had taken all the capsules, he felt so much better that he had the prescription renewed, without the consent of the prescribing physician. By the time the last of the second batch had been taken there was a most beautiful case of salivation, with softened gums and loosened teeth. Who was to blame?

Why should an apothecary repeat such a prescription of medicine without the consent of the prescribing physician, and why not give caution as to its effect unless due care was exercised by the patient? If a physician had personally given tablets to this patient, such an accident could not have happened, because the patient would have had to return to the doctor for more medicine.

I was called to see a child six or eight months old. Had "summer complaint." The parents could not awaken the child. Question: "What have you given this child?" A bottle was produced.

"How much have you given?"

"Only a few drops," was the reply.

Examination showed that at least an ounce of the mixture had been given. Label on bottle: "Mrs. Winslow's soothing sirup." Surely, it did soothe in this case, for in a few minutes the little spirit had taken itself to the baby's heaven.

Nearly all the nostrums for "summer complaints" and "coughs," on the market, contain opium in some form. The promiscuous and continued use of such drugs frequently leads to the opium-habit. Why is it permitted? If the medicine were given in tablet form and given by the doctor, such habits could not be formed, for to get more of the remedy the patient would have to return to the prescribing physician.

A physician writes a prescription for a cough, one containing paregoric, or heroin, or codeine, or some other opiate. It is compounded by some reputable druggist, and is taken by the patient with apparently good effect. Then the prescription is refilled an innumerable number of times and is used by all the neighbors who are in like manner afflicted. Someone out of that number gets the opium habit. They find out that the opiate is what gives them the relief, so they reason, "If that is the case, I will get the clear quill." Soon the habit is fastened on them and only death can cure. Now, who is to blame? Don't be too ready to put it on the doctor, for he only prescribed it once.

Children are very susceptible to the effects of opium and its alkaloids, *and a prescription containing any of these ingredients should never be refilled without the written consent of a physician.*

Another case: A doctor wrote a prescription containing oleum tiglii for a case of obstinate constipation. A partial effect was obtained, so the party had the prescription refilled without advice. The patient was a feeble young lady. Result, a violent dysentery was induced, and death came to rescue the patient from the agony induced by the drug. Who was to blame?

Doses have decreased in size wonderfully in the last fifty years. Extracts and alkaloids have taken the place of the crude drug. Formerly we gave a tablespoonful of powdered Peruvian bark in a little water, now we get the same effect from a grain of quinine; and the same betterment is seen all the way down the line.

As to the expense of the written prescription put up by a reputable druggist and the same drugs given out by the physician, it is at least 50 percent in favor of the latter. The drug bill in the case of a long run of typhoid fever or inflammatory rheumatism, where prescriptions are written, is a big item to the patient. The same drugs can be given at one-half the cost when put up in convenient tablet form. Where prescriptions are compounded and furnished by the druggist, in a long run of a disease, all the funds of the household have been consumed by the drugstore and none left for the doctor.

The physician should be so much interested in the welfare of his clientele that he will make their expenses as light as possible. And right here let me say that nurses are often an expensive luxury. Most of them practice no economy when attending a patient, since the expense does not fall on them. I have been a close observer, and I put the blame on the hospitals, as I believe no instructions are given the nurses, when they are in the hospital, as to practicing economy in the households of their subsequent employers.

Thanks should be given the homeopaths for teaching us to use concentrated drugs and for making them tasteless so far as possible. Chemistry has also come to our

relief, giving us the active principles of drugs. We need administer but little medicine to our patients and we should be explicit in our instructions in dietetics and correct living, and in explaining the relation of moral character to good health. With a few good drugs and an abundance of good horse sense, a broad education, and a sound body, any physician will be able to practice the healing art successfully.

Self-seeking druggists and boasting physicians, like crowing hens, prematurely come to some bad end. It will be a sorry day for the poor when the druggists get the legislature to prohibit physicians from dispensing medicine at the bedside or in the office.

James E. Stubbs.

Chicago, Ill.

[Whether you agree with Doctor Stubbs' ideas or not, I am sure you will be interested in what he has to say. As we have so often stated, whether a doctor prescribes or dispenses his own remedies is something for him to decide for himself. No one can do it for him. We firmly believe that environment, competition, local, economic and social conditions, and many other things should be taken into consideration in making the decision. However—if you have a good druggist, one who serves your interests and does his work well, I certainly should not advise you to break away from him. Just to the extent that the pharmacist cooperates with you in your work has he a right to expect support from you.—Ed.]

PNEUMONIA AND TAPEWORM

So far as I am aware, tapeworms have never been mentioned as a complication of pneumonia, so, I list this case for reference. The patient, a man aged 42, had lobar pneumonia and also tapeworm; he was getting progressively worse, and on the third day was very seriously ill.

Male fern was administered, followed by epsom salt, and this by hypodermic supportive treatment. Six hours later, there passed 25 feet of tapeworm, but without the head. The patient made a prompt, rapid, and uneventful recovery. Four months later the worm was removed, head and all, by means of larger dosage with the male fern.

The point is this: by the removal of most of the worm, a pneumonia-case that looked hopeless was relieved of the parasitic toxemia sufficiently to enable the system to combat successfully the pneumonic attack. This case had worried me, as otherwise I have had but little trouble with my pneumonia patients.

A. H. Beebe.

Stillman Valley, Ill.

A LETTER FROM PROFESSOR LLOYD

In the August number of The American Journal of Clinical Medicine we published a short article written by Dr. E. P. Zeumer, of Harrison, Ohio, in which complimentary reference was made to some of the remedies manufactured by Lloyd Brothers, of Cincinnati, Ohio. In commenting upon this article, we were glad to endorse what Doctor Zeumer had to say regarding the quality of Lloyd's fine line of specific medicines, whose merit is appreciated most by those who have used them most.

This article came to the attention of our good friend, Prof. John Uri Lloyd, who immediately indited to Dr. Abbott the letter which follows, and which it gives us great pleasure to reproduce—special pleasure because it strikes the new note in modern commercial life—the note of generous recognition of the worthy efforts of a competitor. This "new competition," expressed so admirably by Professor Lloyd, is taking the bitterness out of the battle for business and is replacing it with the spirit of the Golden Rule. The letter follows:

My Dear Dr. Abbott:—I write you personally, because in the past we have had so much correspondence as to lead me to make this a personal matter, rather than that you should receive a bare recognition, in a business way, of the article in the August number of Clinical Medicine, entitled "Ipecac and Solanum." Let me assure you that I have read this with much interest, and appreciate much the hospitable manner in which you use the name of our establishment and of the preparations emanating therefrom, in a field in which you also are concerned.

The world is big enough for us all to live together in hospitality; and to "live and let live" is the altruistic ideal of life. The big opportunities in business are not those of the military man, but rather those of the cosmopolitan who feels that all laborers in the field are benefiting humanity, and therefore all of us have a common cause.

I sometimes wonder, as I observe a softening influence here and there and a grad-

ual introduction of humanity into business in place of the destructive methods so long in vogue, whether I may not hope to live long enough to see business establishments no longer antagonistic camps for the destruction of one another, but rather all striving together in a cause in which, in somewhat different lines, all are contributing to the benefit of humanity.

My personal experience has been along strenuous lines, and as I look upon the matter, I feel that much bitterness has needlessly been exhibited by parties who have gone out of their way to use heavy artillery, designed for the destruction of the home of a friend, which, if destroyed, would only prevent the destroyer from profiting much in the future.

For example, had the antagonists of the Eclectics been able to crush the efforts of that school, years ago, the task of some of the new leaders of the old school, who are now seeking to teach their followers that shotgun practice is a relic of medieval inexactness, would be very much more difficult than it now is. Having foreseen the coming of new conditions, and in the face of continual resistance, the Eclectics have long advocated the specific use of remedies in connection with special study of disease expressions.

You may think that all this is far from the text that has led me to write you personally, but in my opinion it is not. The field of opportunity in this direction is illimitable. I have made a lifetime study of the American materia medica, into which study a few remedial agents from foreign countries have been admitted. Yet I feel I have scarcely touched the problem, and surely have not reached into many lines that radiate from the circumscribed opportunity presented to me. Therefore, it has not been with a reluctant view that I have seen different manufacturing pharmacists enter the field in allied lines, as is the case with your establishment. As you fully comprehend, I have viewed all such efforts as a service to humanity.

Rest assured, therefore, that I shall see to it that due recognition is made of such a friendly holding out of the hand as you have shown in the August number of CLINICAL MEDICINE. I shall do this in such a way as to serve the interests of my friends in the medical profession. My ambition is not commercialism, as voiced in the methods of aggressive business, and I believe that the opportunity you have given me by this article will perhaps serve to soften the military methods of others.

Please excuse this long letter, which is not the first tiresome communication I have written you, and permit me again to express my satisfaction over the text you have given in your very fraternal presentation of the contribution of Dr. Zeumer, and in your personal note, added thereto.

Sincerely yours,

JOHN URI LLOYD.

Cincinnati, Ohio.

[Generous, broad-minded, far-seeing cooperation is what we need in all the relations of life—in business as well as in our professions. Professor Lloyd admirably expresses that need. CLINICAL MEDICINE is not only willing but anxious to promote such a friendlier relationship. The best interests of all would be conserved and promoted if the absurd jealousies of business and professional life could be eliminated altogether, all of us working together for the common good. Can we not all, every doctor as well as every business man, strive to bring about that end?—ED.]

ELECTROLYSIS AS A CURE OF PARALYSIS

About fifteen months ago, circumstances led me to investigation and the devotion of much thought concerning the cure of paralysis accompanying and following anterior poliomyelitis, and it occurred to me that electrolysis might, in some cases at least, solve the problem.

Because I believe we are a long way from the last word either on the facts of electrolysis or on the pathology of the condition in question, I will make no attempt to discuss these. Suffice it to say that the two cases in which I had an opportunity to use electricity for its electrolytic effect convinced me that the procedure in these instances was direct, prompt, and of enormous benefit. This view is enthusiastically endorsed by the young man of nineteen years who had been subject to the condition for two years before I resorted to electrolysis, as well as by the parents of a boy of twelve who was becoming more and more incapacitated from paralysis following an attack of anterior poliomyelitis three years before.

My experience has been confined to these two cases, because the few cases I had under my control during the small epidemic (or endemic) of three years ago recovered completely under the prompt and very free administration of formalin; and the extreme difficulty of getting the ordinary layman to realize that, notwithstanding the failure of electricity in the induced current, success might follow the use of the constant current.

The latter current was used, of course. The positive electrode was 6 in. by 9 in., applied over the abdominal wall; the negative electrode was 2 in. by 2 in., applied to

the spine. The sitting lasted from ten to fifteen minutes, during which time the positive electrode was not moved, but the negative electrode was being moved for half the time over the upper (cervical) and half the time over the lower (lumbar) enlargements of the chord.

Soapy water was used to moisten the electrodes.

Not more than 5 milliamperes were used at any time, and if that strength was unpleasant the current was reduced. The treatments were given twice a week.

Notwithstanding the obscure source of the suggestion, the procedure is so harmless and simple that any physician can give it a trial, and I hope many will do so, until it shall be shown that it is either a true advance in the therapeutics of the condition or—otherwise.

G. M. Aylesworth.

Collingwood, Canada.

AN AMERICAN FUND FOR BELGIAN PHYSICIANS

Dr. H. Edwin Lewis of *American Medicine* has made an appeal for funds for the relief of our professional colleagues in afflicted Belgium. We cannot better state the conditions leading up to this appeal, nor better express the purposes of Doctor Lewis and his colleagues, than by reproducing the following paragraphs from the published statement:

"While the condition of the Belgian people is rapidly becoming critical with famine and cold confronting them, it should not be forgotten that the physicians of this stricken land—and their families—are likewise in direst need; the holocaust that has swept their country has also left them destitute—their homes, equipment, libraries, everything in fact, has been destroyed and lost. Hunger, cold and the most abject misery are all that they can expect unless those of us in happier circumstances take steps to relieve their condition—not next week, not tomorrow, but *now, today!!*

Reluctant as we have been to make any move in this direction, for fear our purpose would be misinterpreted and misunderstood, it seems absolutely necessary that something should be done, if for no other reason than, to draw attention to a class of men who are apt to be overlooked because of their activity for others. Therefore, hopeful that no one will place a wrong interpretation on the movement, or be so unkind as to think it possible for this or any other journal to seek any publicity from a condition too poignant with human misery, we have yielded to the requests of many interested friends and will straightway undertake the collection of an American Fund for Belgian Physicians."

The work of collecting this fund is directly under the charge of Doctor Lewis and *American Medicine,* but about forty physicians representing all sections in the United States are cooperating with Doctor Lewis in the effort to make it a success. A member of the editorial staff of Clinical Medicine has been honored by being placed upon this committee. It gives us great pleasure to endorse the movement, which we trust will find quick response in the hearts of every one of the readers of this journal.

There are thousands of our medical friends who should contribute. Even if their gifts are small—one dollar, fifty cents, twenty-five cents—they will be appreciated. However small, they will help to swell the sum which in the aggregate we hope may be large. Let us American physicians, let every physician whose heart beats in sympathy with Belgium's noble, uncomplaining, hard-working doctors, rally to their assistance in this time of sorrow and destitution.

Remittances should be sent direct to Dr. H. Edwin Lewis, 18 East 41st St., New York City.

A LETTER FROM THE FIRING LINE IN FRANCE

Years ago, I was intensely interested in the story of an American surgeon, concerning his battlefield experiences in the Civil War. When I entered upon active service here, in the present gigantic struggle, I thought something similar would take place. To my surprise, everything seems new. I have been a field-surgeon for two months and have kept on what is called the front, and, yet, I have never seen a clash between opposing forces.

I have heard of bayonet charges and have been told that miles away the forces were in close contact; but, beyond the roar of guns, the smoke at times and occasionally a shell bursting near me, I have no conception of what a real battle means.

At present, three of us field-surgeons are on a line nearly five miles long. We are

supposed to do the work, calling for immediate aid on the field, that comes to us, and to direct where the wounded shall be sent. When we perform any major operations, such as tying the arteries or closing ghastly wounds we put our card, showing the time of day, on the body of the patient, and the surgeon in the rear knows who has done the work he is called to attend to.

There is a degree of uncertainty that prevents us from having any kind of rest or even sound sleep. We take our turns for thirty-six or forty-eight hours and then go back to the main hospital for an equal rest. During our field service we must sleep and eat under the best circumstances possible, but be ready at any moment to attend the calls, sometimes half a mile away. At all events, we go where we are sent. Occasionally a supervising surgeon comes along and collects whatever data we may have gathered, particularly concerning the dead and wounded, of which we are supposed to keep a copy. Occasionally a high officer will make an inspection of the grounds. Also, once in a while, a battery will go by, or a group of men or ammunition or commissary wagons, but beyond that we are in a kind of neutral zone, in which we see very little. However, we are very likely to find ourselves in a region where shells are falling thickly, with an inspiring prospect of getting very badly hurt.

After a day of very hard work, I found a shed on the edge of the woods that seemed to promise a sleeping-place for the night. Soon after dark, shells began falling all around, and I had to retreat, having several narrow escapes. Afterward I was told that an aeroplane probably had marked out this location as a place where batteries and troops were resting for the night, and this information having been conveyed to a battery four or five miles away, the latter commenced a vigorous shelling of this particular point. In reality, it was only a tired group of stretcher-bearers and red-cross nurses who sought repose at this point.

Recently we were hurried to a valley on the other side of which a charge was made by some of the Bengal troops. Two of us were soon on duty, and for several hours groups of wounded men came over the hill from the front for attention and service. Some East India troops craved the privilege of charging a line of breastworks with bayonets. They were not seen until they reached the trenches, and then a fearful conflict took place that lasted ten or fifteen minutes, in which a large number of soldiers were killed, while others ran away, leaving the trenches deserted. The troops could not hold them, for in a very short time a furious cannonading started in all along the line, and the Bengal troops had to retreat at once. Of course the trenches were reoccupied by the Germans in the course of an hour or two, and this bayonet charge was simply a clash, without any positive gain.

Nearly all the wounded suffered from stab wounds, or had broken arms and legs. The stories they told of the mortality of the Germans were very gruesome. A few stretcher-bearers went over the line to bring in the wounded Bengal men and to take note of the others that were killed. Knowing that the position would be retaken, they left all the wounded Germans.

It is a matter of surprise that so few are being killed. While the cannonading is very severe and the schrapnel shells are very violent in their explosions, only a few persons are killed instantly. The men on the front soon learn to scatter, and one rarely sees any large group of men at any one place, but it is understood that, if a charge is threatened, a large body of men can be concentrated to meet them in a very short time.

The hospital work in the rear is very methodical, and one is impressed with the excellent care and facilities for placing the patients in the best possible conditions. There is a kitchen for broths and food extracts, and the dangerously wounded are housed close by, under the best circumstances. Tents are used to a large extent, although barns and sheds in villages are utilized wherever they are available.

The effort seems to be to get the wounded to the rear, away from sight, as quickly as possible. Men who can walk and men who cannot are hurried along with motors, out of the sight and sound, as soon as possible.

One often is surprised to observe how quickly men in the trenches know how to give the first aid to wounds and injuries, having little kits of lint and adhesive straps, and being taught what to do just there and then; later, when time permits, they are directed back to the rear.

Comrades are not allowed to leave the ranks to help each other, excepting in a limited degree, but there are always strag-

glers, red-cross nurses and stretcher-bearers available; and along with these is the field-surgeon, and often he has no occasion to add to the treatment which the soldier has received in the trenches from his comrades or by himself. He simply directs him how to go to the most available place or possibly may readjust the early treatment he has received. In my observation, the machine-guns are not used very often, and then in the most unexpected ways. In the beginning of the war, masked men rushed upon these machine-guns, both in the front and on the side, to capture them, but this was found so destructive that both sides have learned caution, and whenever a machine-gun opens, the men scatter or fall down on the ground.

Sharpshooters at different points are very troublesome, but their work is of short duration. Guns that will carry nearly one mile are in use on both sides; but, if they become particularly troublesome and are traceable to any one point, a few shells quickly break up the combination.

The Germans taken prisoners in my observation are depressed and deplore the war seriously, and seem glad to be out of the center of conflict. I have seen some old men and some very young men. Evidently there is a great disparity in the ages of the soldiers opposed to us. One has a very limited conception of events, except right in their immediate notice. So far the amount of sickness is very small.

The English troops are very cheerful, and are buoyant and eager in their desire to take a very active part. When the weather is bad, there is gloom and depression, but, otherwise, there is a general feeling of unusual confidence. Each wounded soldier is impressed with the necessity of saying very little and of avoiding any kind of comment on what he has seen and on the war in general.

The rations generally are good. The water and sleeping-quarters are the most irregular. Great care is being taken to keep the water from being polluted, and about the hospitals only sterilized water is used. So far as I have observed, the wounded men do very well with water and antiseptic dressings, and there is little or no tetanus or any symptoms of malaria or fevers. I see wounded men for only a few moments, and then they go back to the rear.

They are generally well nourished and rather gloat over the fact that they have been sacrificed for their country. There are some American surgeons in the rear hospitals who are doing operative work, and there are some in the field service.

All of us are looking forward to a cessation, and when a rush-call comes to go here and there, we inwardly hope that it may be the last one. Papers that we read give no more information than what probably you get also; and we are as eager to hear what is going on, beyond our immedite circle, as are our friends at home.

Wherever we have been, the natives seem very friendly toward us and anxious to have us help them all we can. They are practically ruined. Their fields and homes are destroyed if in the zone of active operation, and many of them appeal to the soldiers for food, which the latter very willingly share with them.

A great many officers and surgeons are keeping very minute diaries, with sketches of the country and the location of different troupes, but they are pledged to keep these secret until the war is over.

I have not seen much of the French army, but the men seem smaller than the English troops, but more active. The Frenchmen have been near us several times, and they seem to be able to charge both with infantry and with battery on very short notice, and to fall back equally as rapidly. The English and the India troops move slower, but they soon find that it is very difficult to go about with military precision, especially when in the firing-zone. They straggle and move around irregularly, but there is a kind of precision in their movements, that shows that somebody is directing them.

At a ford on a river, I saw a large body of men massed, to prevent the Germans from crossing. There was a heavy artillery fire for an hour or so, and a dense smoke and fog, and afterward we were told that a sharp encounter had taken place and the Germans were driven back. We took care of a large number of wounded, half a mile or more, and for a time the shells fell all about us, so that we had to move in another direction.

Every now and then an aeroplane comes whistling overhead, and when we find that it belongs to the enemy every sharpshooter takes a chance, but usually the distance is so great and the machine moves with such

rapidity that it is impossible to tell whether they are hit or not.

Most of the roads are very well adapted for motors, and great trucks loaded with men and provisions are incessantly moving up and down. Some of them go with great speed, and occasionally someone falls off or is runover, so that our services have to be called for.

In this chatty letter, I can write only of the things that I see. Of course, among the men and officers, there is a great deal of gossip and intense anxiety to know what is going on, and also to hear from home, but all our letters are censored and if we commence to tell how many are wounded or how many we have seen killed this is suppressed.

The impression prevails among the men that a winter's campaign is before us and the stock of blankets and heavy clothes that are coming in indicate that we are likely to stay in this region for some time to come. So far, it would seem that the fighting on this line is confined largely to the artillery, while the infantry is kept only in service to protect the guns and batteries from being taken.

Picket duty is about the most dangerous of the work we have seen so far, especially at night, but experience makes men very alert, and not withstanding the darkness and fog, they are able to determine a great many facts about the movements of the enemy.

The pickets are previously informed as far as possible concerning the batteries and trenches of the Germans in front of them. The air-men gather this information in the afternoon, and they reason from the activity displayed whether there will be any clash in the night or not. On several occasions, the field surgeons have been ordered to certain sections of the line for the night, with the expectation, no doubt, that there would be work there. On one or two occasions this was verified, but the affair was over in a very few minutes, and, although the wounded who were brought in were numerous, we could form no idea of the number of dead.

Each surgeon is supposed to make a note of the name and rank of anyone who is found dead, especially of the allies. This information frequently comes from the soldiers, and cannot be verified, without great danger to the surgeons.

[This letter is written by a British army surgeon serving at the front, and was sent us by Dr. T. D. Crothers, of Hartford, Conn., to whom it was written. Another letter next month.—Ed.]

NINETY-THREE PERSONS INFECTED BY A TYPHOID CARRIER

A remarkable outbreak of typhoid fever occurred in the city of Hanford, California, in March, 1914. This epidemic was investigated by W. A. Sawyer, of the Hygienic Laboratory of the California State Board of Health, who reports his findings in a paper published in *The Journal of the American Medical Association* (Oct. 31, 1914, p. 1537). During this epidemic 93 cases of the disease occurred, 45 of these being definitely proven by a Widal reaction, 23 others giving partial Widal reactions and the characteristic symptoms of the disease; 7 presenting no Widal reaction but giving typical symptoms; 9 apparently being typhoid fever but diagnosis not verified by the Widal test; while 9 were doubtful, yet apparently very mild cases of typhoid fever.

Upon investigation it was found that 85 of the people attacked had partaken of a public dinner and supper given by one of the local churches in a public hall on March 17. The 8 others reported had eaten of the food served at the dinner, which was brought them by friends. This dinner was partaken of by 150 people, 125 eating at noon and 45 in the evening—some of these partaking of both meals.

A careful investigation of the source of infection was made by Doctor Sawyer, and after much painstaking study, both by himself and the state laboratory, the origin of the disease was definitely traced to one woman, who is called Mrs. X. This woman was 63 years of age and had no knowledge of ever having had typhoid fever. However, the disease had been present in her household 35 years before, when a daughter had passed through an attack, and it was suggested that she may have received her infection at that time. Formerly Mrs. X. kept a boarding house in Hanford, and during the last eight years four of her boarders had suffered from typhoid fever, two of them in March, 1912. An examination of Mrs. X's feces revealed the presence of virulent typhoid bacilli, all giving complete agglutination, the agglutinability showing little

change between the third, fifth and eighteenth generations.

Investigation showed that Mrs. X came into contact with only one of the various dishes served at dinner. While she helped in cutting the bread and waiting on table, and otherwise to a slight degree, it was believed that the real source of infection was with a dish of Spanish spaghetti which she prepared at home up to the point of final baking. Inasmuch as she had nothing to do with the baking process, at first thought it would seem unlikely that this dish could be infected. However, experiments made in the state laboratory showed clearly that spaghetti made in the manner employed by Mrs. X. was not sterilized by the baking process. Cultures taken at the surface of the dish soon after the pan was removed from the oven showed no typhoid bacilli, but cultures taken half an inch from the surface showed a few colonies, and those from a depth of 2 1-2 inches abundant colonies of this organism. In other words, it was shown that the sterilization of the dish of spaghetti at the time of baking was not only improbable, but practically impossible. There is reason to believe that it was this dish which caused the spread of the infection. It is shown that the ordinary processes of cooking are not adequate protection against the growth of typhoid bacilli.

Another interesting fact regarding this epidemic was the shortness of the period of incubation. The first case developed three days after infection, while the majority developed within six or seven days. One case was delayed for 29 days. The length of incubation is usually given as about 14 days.

EMETINE IN HEMORRHAGE

During the last few months we have published in these columns a number of short articles in which different physicians have given their experiences with emetine hydrochloride in the treatment of hemorrhage. Thus far we have not heard of a single failure with this drug, although some successes are more striking than others. In many instances the relief secured is almost immediate.

For instance, here are records of some cases of hemorrhage treated with emetine. as reported to us by a friend in New York City. He tells us that Doctor E. Valentine Buck reported to him a case of epistaxis occurring in a maid in the hotel where he lives. The loss of blood had continued so long that it had come to be a serious matter. The young woman bled every day, in spite of packing, the use of normal serum, and all the other remedies with which he was familiar. He gave this woman one injection of emetine hydrochloride (1-2 grain), and she has not bled since, and this was a month ago. Doctor Buck assures our friend that emetine without doubt is the most valuable antihemorrhagic he has ever used.

Another well-known New York physician, whose name we are not permitted to use, reported to our friend success with emetine in the treatment of two cases of hemorrhage from the lung. Both cases were severe. This physician has already had experience with the emetine in hemorrhage.

We wish that other physicians who are using this drug, whether in the treatment of hemorrhage, pyorrhea, dysentery, bronchitis, pneumonia or any other disease, would write us fully, telling their experience. Why can't we have a whole "chapter" of reports for publication in our January issue?

TWO CASES OF AMEBIC DYSENTERY

I wish to report two cases of amebic dysentery that I have treated during the last summer, so as to have them placed on record.

Case 1. Mr. F. M. had been sick for a year, the trouble commencing in March, 1913, as a dysentery. He soon developed jaundice of a very pronounced type, with rapid enlargement of the liver, colicky pains over the upper abdomen, and occasional spells of diarrhea. He came under my care one year later, and I pronounced the trouble amebic dysentery.

I instituted treatment with emetine hydrochloride, in 1-2-grain doses every twenty-four hours, and a quinine-bisulphate solution, 1:2000, at night. After six doses of emetine had been given, I gave four doses of Van Cott's vaccine, following later with two more courses of emetine and quinine. The patient responded promptly to this treatment, and in two and a half months all evidence of disease had disappeared. However, I gave him six more doses in August.

Physicians here and in Nashville, Tenn., had said nothing short of an operation

would relieve this patient; yet, he is now in perfect health.

Case 2. Mr. J. G. had been ailing for sixteen years, and he gave a history of indigestion, colicky pains in the upper abdomen and frequent spells of dysentery; also, he was very nervous and anemic.

In May last I gave him twelve doses of emetine hydrochloride, 1-2 grain for twelve consecutive days; also quinine enemas. Relief was prompt, commencing with the first dose. I have given one similar course of six doses since, and am now giving him another like it. He is infected with the bacillus coli, and I have given him one dose of Van Cott's vaccine; but he would take no more, because of the reaction produced.

I am treating another patient now, and shall report results later.

E. C. Harleson.

Clarksville, Tenn.

[Here is a fact which should be emphasized. Please paste it in your hat where you can see it every time you are called to a case of dysentery: Dysentery occurring south of Mason and Dixon's line is likely to be of the amebic type, and this is nearly always curable with emetine. In every chronic case of dysentery, wherever it occurs, treatment with emetine, administered subcutaneously, should be given a trial. This alkaloid can do no harm—and in the amebic form of the disease it is specific.—Ed.]

A DELIGHTFUL NEW BOOK BY DR. GEORGE F. BUTLER

Are you a reader? Have you, as Shakespeare says, "fed on the dainties that are bred in a book, eaten paper, as it were, and drunk ink?" Are you one of these epicureans that like to go down to the bookstores and browse among the offerings, and pick up a tit-bit? Do you scan the catalogs of rare and precious books, as your wife does the bargain columns in the daily papers? If so, *you* will appreciate to the full the delightful literary feast prepared and offered by The Ralph Fletcher Seymour Company, of Chicago, in George F. Butler's beautiful epic, "The Travail of a Soul."

In the fever and the fret of modern times, there are all too few such contributions to literature, out of the calm introspection of the seer's mind and the poet's heart. "The Travail of a Soul" embraces the whole experience of a human life—the confused groping for the beautiful, the struggles with temptation, the blunderings and failings, and, out of it all, the final attainment of happiness and love. Few works, in poetry or prose, have ever told so mysterious and absorbing a tale in so compelling and beautiful a way.

Most of our readers know Dr. Butler, and have, at some time or other, come under the spell of his seeing eye and his lilting voice. To them it is enough to say that "The Travail of a Soul" is Dr. Butler at his best. He has never given to the world anything more significant.

At the author's insistence, it is not to be given public sale, nor is any effort to be made to exploit it. The edition will be a strictly limited one, printed and bound in a fashion conforming to the spirit of the poem, each copy numbered and autographed. There will be no intention of making money out of the book. The modest price will barely meet the cost of issue. If you wish to avail yourself of this opportunity, it will be necessary for you to send your order, with your check for $2.00, in advance, to the publishers, The Ralph Fletcher Seymour Company, 408 Michigan Avenue, Chicago, Ill.

Beyond your own desire for the book, it would make a beautiful and acceptable Christmas remembrance for your friends.

GOMBAULT'S CAUSTIC BALSAM

Recently a subscriber of this journal called for the formula of Gombault's caustic balsam, but which the editor was not in position to supply at the time. Perhaps the following information will serve the purpose.

The preparation in question is a proprietary horse-liniment that was in vogue as long as at least thirty years ago; a crude, harsh mixture, but which must have found favor, since it still is being listed by the jobbers, while during all these years editors of pharmaceutical journals have been appealed to regarding its composition; indeed, it seems almost to have passed into the same category with "Haarlem oil" and "Turlington's balsam," which names virtually have become generic (like, e. g., "listerine," "chlorodyne," etc.), promiscuously

and openly manufactured by any druggist, although the "real" article still is put out as a secret nostrum.

The composition of a secret mixture being arrived at largely by shrewd guesswork, aided by more or less successful analysis, it is no wonder that alleged formulas for them often are as numerous as they are at variance. So, in a measure, in the case of Gombault's balsam; still, the basic properties are there; for, the leading and determining ingredients (notably the sulphuric acid) are readily determinable.

I submit several formulas, any one of which probably is as good as any other and will serve the purpose, provided a body does not care to "stick to" the genuine article—which, by the way, often may have been perfected, through long experience and specialization, in a way not to be proven by destructive chemistry; for, manipulation alone may make a vast difference where changes are possible. Just think of merely baking a loaf of bread!

The following formula is credited by the "Thesaurus of Proprietary Preparations" to *The New Idea*, a house-organ of Frederick Stearns & Co., at that time a firm devoted to getting up preparations similar to given popular nostrums:

Oil of red thyme	parts	3
Oil of amber, rectified	"	8
Oil of rosemary	"	10
Camphor	"	20
Alcohol	"	30
Oil of turpentine	"	340
Sulphurated oil	"	2190
Sulphuric acid	"	90

Put the sulphurated oil into a capacious vessel, best using a porcelain capsule or an earthen pitcher or jar. Then slowly and cautiously pour in the acid, the expert allowing it to run along his stout glass stirring-rod. (The reason for this procedure is, that a chemical reaction takes place and heat is generated.) Set aside to cool. Meantime dissolve the granulated camphor and volatile oils in the alcohol, then incorporate the cooled sulphuric-acid mixture.

Here is another formula, copied from *The Western Druggist* (Chicago). The first time that journal had any reference to Gombault's caustic balsam was in February, 1888, and the formula, printed in answer to a subscriber's inquiry, was credited to *The New Idea* (quite likely of the anteceding year); and it ran this way: Take of

Cottonseed-oil	ozs.	4
Croton-oil	oz.	1
Oil of turpentine	drs.	4
Oil of camphor [camphorated oil A.V.]	drs.	2
Oil of thyme	drs.	2
Kerosene	oz.	1
Sulphuric acid	m.	40

Mix the croton and cottonseed oils, slowly add the sulphuric acid, stirring constantly. When cold, incorporate the other ingredients.

The originator of this formula avers that, after standing a few days, this mixture "resembles the original fairly well" and "replaces it to good advantage." Undoubtedly this mixture constitutes a good veterinary counterirritant; still, it is not resembling "looks" one wants, but something as nearly as possible like the prototype.

A year later, another subscriber of *The Western Druggist* asks about Gombault's caustic, but the editor passed it, forgetting his former reply. Thereupon a Buffalo druggist (April, 1889) gives this information, not telling how he got his formula; which, though, seems to be virtually the preceding one, with the addition of cantharides; viz.: Take of

Oil of thyme	dr.	1-2
Oil of amber	dr.	1
Oil of rosemary	dr.	1
Oil of turpentine	ozs.	6
Camphor	dr.	1
Tincture of cantharides	oz.	1
Sulphurated linseed-oil	ozs.	6
Sulphuric acid	fl.ozs.	1 1-2

Put the sulphurated oil into a porcelain dish, then cautiously pour in the sulphuric acid in small amounts, stirring constantly. After about eight hours, incorporate the tincture of cantharides and the volatile oils with the camphor, and when this has been dissolved add enough sulphurated oil to complete 16 fluid-ounces.

The sulphurated oil may be purchased, but the Dispensatories and the National Formulary give directions for making it.

From then on for some eight years, the same journal was pestered with requests regarding the composition of this (obviously favorite) veterinary caustic liniment, but nothing new developed, and the editor confined himself to repeating the formula from *The New Idea*. Of course, he had no idea as to whether it was anything like the original—never saw that!

Incidentally, it may interest some of the doctors who not as yet sport an "auto" to hear what good this Gombault's balsam

is supposed to do; and they can for themselves judge whether the mixtures submitted will subserve those purposes: This is what the label on the bottle claims:

Gombault's Caustic Balsam states on its labels that it is a safe, speedy, and reliable remedy for curb, splint, sweeney, poll evil, grease-heel, capped hock, strained tendons, founder, wind-puffs, mange, skin diseases, old sores, dropsical affections, inflammations, throat difficulties, swellings or ulcerations, lameness from spavin, ringbone, and other bony tumors, and many other diseases, or ailments of horses, cattle, sheep, and dogs; will quickly remove all bunches or blemishes, without leaving any scar or other injurious effects. It can also be reduced with sweet or raw linseed oil, and used as a most valuable liniment for all kinds of simple lameness, strains, etc.

ADOLF G. VOGELER.

Chicago, Ill.

YOUR OPPORTUNITY: DON'T MISS IT

Why, oh, why, will doctors be such unpractical, inconsistent men? During the recent election campaign, the Chicago Medical Society sent a letter to every physician in a certain district, asking him to help defeat a certain candidate for the legislature, because that candidate had pledged himself to introduce an optometry bill, legalizing the fitting of glasses by registered optometrists.

I suppose that this represents the attitude of medical men and of organized medicine generally upon the subject—and rightly so. Yet, what is the actual state of the case? Briefly this: Hundreds of thousands of people throughout the country who need refraction. A few oculists, mostly centered in the larger cities, wholly inadequate to meet the demand, even if you could persuade the people to go to them, which you can't. And not one general practitioner in a thousand who knows, or cares to know, how to refract.

If the doctor really wants to keep refraction out of the hands of the nonmedical man, there is one argument that is unanswerable and all powerful. Demonstrate that he can do the work himself, and do it. The public has waited, long and patiently, for him to make good his claim that refraction is a function of the medical man; and is only at last being driven to the optometrist (and worse) by the doctor's indifference and inaction.

Refraction is peculiarly the function of the physician. There is every reason why the doctor should do the work. He has every kind of practical advantage over the optometrist, if he only cares to use it. There's plenty of business waiting for him, if he only signifies his readiness and fitness to take care of it; hundreds of people needing refraction in his district who will naturally and preferably come to him for it if they know that he can and will do it. If he can't and won't, what are they to do? You can't make a person take an expensive trip to the city, to the oculist, for a pair of glasses, and you know you can't.

If the doctor really believes in refraction as a medical function, then let him get to work and practice it. If he doesn't know how, let him get busy and learn. It's a very simple matter. He doesn't need to be an oculist. There are plenty of ways in which he can learn without even leaving his own office. And it is a good-paying business, that makes friends and patients for him.

THOMAS G. ATKINSON.

4770 Lincoln Ave, Chicago.

COMMENT ON CURRENT LITERATURE BY A COUNTRY DOCTOR

Echinacea.—Lyman Abbott, of *The Outlook,* receives letters from, and writes to, "unknown friends," and I take it that he means men and women whom he has never met but would like to, because he considers no one a sure-enough stranger. I have received letters from several persons whom I can classify as such, and among them is one asking me whether I am familiar with echinacoid. Yes, doctor, I am. Let me tell you.

My first use of echinacea angustifolia was in the form of the "specific tincture," years ago; and I still am employing it, as I also do the concentration echinacoid, the latter being more easily carried than a fluid preparation, while, yet, seeming to represent the entire virtues of the drug.

This is one of the drugs which have gradually crept into use from, at first, nonprofessional sources, and then from its persistent and successful use by the Eclectic branch of the profession. I have had the plant pointed out to me in the West by Indians and frontiersmen as a sure cure for snake bite. More-

over I have heard the same said of it right here in Alabama by an old negro, who pointed out what I took to be braunaria pallida, or blue coneflower.

Mohr, in his "Plant Life of Alabama," does not seem to attribute value, as a species, to the angustifolia; but Gray does. However that may be, the plant has an extensive distribution, especially in the West; although it never seems to grow except over a limestone formation.

So far as my own experience is concerned, I will state that for conditions requiring strengthening of the reparative forces of the body—raising the opsonic index—I know of no agent of greater value than echinacea. It may be used both locally and internally, alone or in combination with other drugs; it hardly has a parallel in our materia medica, although baptisia nearly approaches it in some ways as does thuja also. However, the latter two have distinct indications, and neither is so broad in application.

I wish someone would use echinacea in a series of cases where indicated and prepare case-records, with careful blood count in each. I do not doubt that the clinical record of this drug would be borne out in black and white, or, rather, in "red" and "white." At all events, I consider that it is "good for" anything requiring the police-powers of the individual to be increased. And not only that, but the drug is "safe and sane," and, to use an expression of Dr. Stollenwerck (one of my Unknown Friends), it does not require much "watchful waiting" and a personal supervision of each dose administered.

Yes, doctor, drugs from Europe are up, but echinacea, macrotys, apis mel., solidago, eupatorium perfoliatum, eupatorium purpurea, salix nigra, rhus tox., besides some few others, are grown by nature right here in your own country. Incidentally, if "gossypium" does not go up, you and I shall have to go and dig native "yarbs" and skin off a little native bark to treat our patients with.

The Twilight Sleep.—Nearly every lay magazine I pick up seems to have something to say about twilight sleep, as "made in Germany." I admire the Dr. Lyman Abbott, of *The Outlook*, very greatly. True, if he and I ever live in the same precinct, I am going to take up the matter of our pairing in the voting; but, still, I must say he is one of the most liberal conservatives and the most unorthodox orthodox teachers I have knowledge of, with all that that implies. He is a lovable personality and a deep, broad thinker. However, in my opinion, recent advice in *The Outlook*, that women be ultraconservative regarding the selection of a line of treatment when being confined is a bit far-fetched. I think that the drugs for these purposes (as well as others) should not be discussed with the patient. All of them are, of course, dangerous and not to be placed in the hands of anyone who by misdirected use may cause harm. I think it would be far safer to place edged surgical tools in the hands of the untrained than to let them have the say-so as to use of such drugs as scopolia, hyoscyamus, papaver, atropa, and the like.

The modern demand and trend is toward painless childbirth, but advice by lay magazines regarding the manner of confinement is possibly a bit farfetched. I believe in popular knowledge of things medical, including all points relating to hygiene, sanitation, and general disease prophylaxis, and I realize that the day of mysteries about things scientific is gone. Nevertheless, we hardly have reached a point where, when called to attend a confinement case, we can with advantage hold a consultation with the patient and ask her whether she prefers German, American, Scandinavian or esoteric methods, and just how much of a dose of any of the very powerful alkaloids she thinks would be perfectly conservative for her. In place of this, the modern obstetrician will go into the lying-in chamber with a full sense of his responsibility to mother, child, and society, and will employ anything needed, from his own strong and positively asserted personality to hyoscine, chloroform or anything else, even including consultation and cesarean section.

In this vicinity, the physician seldom sees a confinement case without a "granny" having been in attendance for many hours and who has decided that "it is stuck and won't come." For this reason, it is almost certain that such a call is to pathological labor. It is always a good plan to take everything portable and available in the way of possibly indicated remedies and all the hardware that can be transported conveniently. About the only thing to figure on is that it is probably not a case of placenta prævia, and sometimes the physician gets to see that if in a marginal form. As for myself, I often wish I knew of more resources and that I could get a consultant in time. However, it is remarkable what can be done with the modern aids to quick and safe anesthesia to any degree desired, and it is also remarkable to what a low percentage mortality of mother and child can be held down in pathological labors.

Get a Typewriter.—No! I am not advertising any make of machine, in fact, I have not even asked the people from whom I purchased mine how much they will turn loose if I mention the make. What I want to say is, that many of the standard-machine makers are replacing present models by newer, better ones for the expert typist, but which are not of any special advantage to the ordinary user. This fact enables one to purchase a typewriter at a most reasonable price—and the great advantages to be derived from the use of one can not be realized until you have one. Labels look better and are more legible. Often notes to patients giving special instructions are sent, and if these are "printed," it is more nearly certain that they will be correctly read. Also, having a machine will make any busy man attend better to the amenities of social and semisocial correspondence. From a financial standpoint, the typewriter should pay for itself, if one will devote a few of his odd moments to writing short, sharp, dignified, yet, positive notes to divers patients who fail to realize that it takes money to feed a family and a pet saddle-horse.

The only disadvantage I have found in using the typewriter is, that it requires the presence of a dictionary upon the desk. Given a mind naturally phonetic as to spelling, and let daily life, correspondence, and interchange of thought be carried on for a protracted time in the more naturally spelled and less heterogeniously derived Spanish language, and a good dictionary ever at hand is needed. Clearcut type does not disguise eccentric spelling as does a handwriting which would hardly secure the professorship of calligraphy in a business college.

Nonpaying Patients.—Call them real or involuntary deadbeats, choose any synonym you will, but the fact remains that certain clients do not pay. Whether they be intentional or unintentional delinquents, makes no difference in its last analysis; some people do not pay me, although I suppose my percentage of collections is fairly good. Even the lay press has taken up the subject lately, and it is a serious problem. I will give a few cases that, although they are purely hypothetical, are parallel with many genuine ones, I am sure.

Old Mr. X is a nice old gentleman and evidently conscientious. He has been a producer of wealth to the amount of his needs and those of his family until recently. Now he has an invalid wife and certain unmarried progeny; those that are married being unable to help him. In fact, it might be said progeny could be classed as semi-gelatinous offspring of consanguineous and partially albuminous parents. (Partial paraphrase of Dr. Upsher's, of the University of Virginia.) Economic conditions are such that the old man can just hold his own when sickness does not intervene. Sunday he glorifies the Deity in a four-year-old suit and gives thanks for his heritage beyond the grave; but, as for the present, he is down and out, although he is a "nice" man, in some respects a lovable man.

It is very well for the individualist to say that this is a land of equal opportunity for all and that Mr. X should have put by something for his old age; and it is also very well for the collectivist physician to say that he has reached an age where society should at least partly pension him. But it seems to be up to the nonbeliever in the necessity of charity to furnish, as an individual, services and medicine, including the helpful smile, that should reinforce the suggestion accompanying every dose. Perhaps before the time when general prophylaxis has done away with most disease the STATE will care for cases like this; but until then what? Someone please tell me; perhaps I have a real Mr. X, or may have one.

Bill Y is another type. Bill would pay his family doctor, but, of course, he is last on the list. Sometimes the purchase of a new hunting dog, a little trip, a small amount of prohibition booze or other necessities take the "last bale," seed and all. It is not because Bill's doctor fears that he will get another M. D., he devoutly wishes he would; but some way or other he always goes. Bill will holler, "Hey, doc," at 2 a. m., and just talk him into going. Is it because the doctor is sorry for the wife or little Bills, already here or still nascent; or why is it? Go he will, sore as he is, and knowing, as he does, that he can not even get a load of fodder from the ubiquitous Bill. He will go this time and possibly the next pending arrival will be named in his honor. It is just possible that this heartfelt token of appreciation will be shown. *Why?*

Jim Z is yet another example—also hypothetical, of course. Jim has been turned down by everyone and forced to get real money when in need of professional services. This is strange, too; Jim always has paid his doctors. Yes! paid them well—in slander. Jim has never had a capable physician in his family. Some people, especially those who have been up against it, think that at least a

modicum of medical knowledge is required to get their little piece of wallpaper. I thought I was sweating the figurative blood and that I had to make a hard stirup of brain-cells of latent memory; but according to Jim's estimate they must have gotten their education from a superficial glance at a patent-medicine almanac. One attendant kept Jim's wife in bed for four weeks, *to make the bill big;* the next one resorted to in extremity can not doctor his dog again, and the last one should not be tolerated in the community.

The Jim type is easy to handle, but how shall the others be dealt with? It is hard for the average man to get on when well, but when sick it is an extra load. Just where is the line of demarcation between the deadbeat and the unfortunate? How much charity work should be forced on the individual?

"September Morn" in Alabama.—Last night a hurry-call came. Of no especial interest from a medical standpoint. Just acute indigestion, a general upsetting of the alvine tract. Papain, acting, as it does, both in acid and alkaline media, aided by hot applications, the colon-tube and a hypodermic of pituitrin, to hasten restoration of peristalsis, were all needed. It was the home trip which furnished the item of interest.

Going into a stretch of woods, everything was dark. The milky way was just beginning to be modified by a scarcely to be defined creamy tint of its nebulæ, the seat of the coming sunrise was just less dark, the woods were, seemingly, darker than ever; not even the discord of an owl broke the silence, although better ears might have heard a far-off cock crow. Half an hour later, the dark forest-trail opened and a new day had been delivered from the womb of time, without travail. At one side of the path was disclosed a pasture, to the other a cotton field. The pasture's green was relieved by the yellows and purples of the late-blooming composites and vetches. The white of the open cotton was offset, on close look, by the number of the picked bolls and the dulling green of the foliage. As yet no frost has come to tint the just-left forest, but the shading of the chlorophyl greens was exquisite. Over pasture and cotton field were myriad dew drops. Hackneyed likening of dew drops to jewels fails; these were just dew drops tinted by a rising sun. Sun-tinted dew drops, that is all. Do not speak of solar-spectrum coloring—I have forgotten the solar spectrum clean to the ultraviolet. There was no thought of science. They were just dew drops.

While I am no poet, and not even claim the hereditary or atavistic right to the soul of one, I involuntarily dismounted and threw the lines over the broncho's head. Both rider and "bronch" being creatures of the West, the mount calmly grazed as far as possible without wandering and the rider stood and took in the details of the vista. Carried on the unknowably gentle breath of the morn were wisps of white vapor extending into the distance almost to clouds, just letting through a glimpse of the final break of the Appalachian hills, that were once the Appalachian range, dying out toward the Warrior River near its junction with the Tombigbee. The rider took the lines, grabbed the check of the bridle, to forestall possible pitching, swung into the saddle, and let her go. Home, a cup of hot coffee, forty winks before the day's routine.

A Bit of Folklore with Apology to Uncle Remus and B'rer Rabbit.—Does anyone know why a plantation darkey always asks for the tooth the doctor pulled? It took a long time to find out, but this is authoritative. It took time and patience to get at the real cause, but here it is.

If anyone has one of your teeth and combines it with a lock of your hair and a little piece of lodestone, wrapping the same in a red flannel rag that has been worn next to you, and strengthened up by the addition of a few feathers from a "frizzly chicken," it will "sure trick you." That means "hoodoo."

How far is this from the Congo? Many of my northern friends will not appreciate the value of this bit of ultrascientific knowledge here freely imparted, but most of those from this part of our republic will. Possibly some of them can add more facts to it. Anyway, did anyone ever see a "nigger" in such agony that he forgot to ask for that tooth?

A. L. Nourse.

Sawyerville, Ala.

THE SPRINGFIELD OPEN AIR COLONY

Our good friend Dr. George Thomas Palmer, of Springfield, Illinois, is doing, in a quiet unostentatious, business-like way, a most admirable work which deserves much more publicity and support than it is receiving. He is furnishing and conducting "a place near home where the tuberculous of moderate means may regain his health and learn how to live." And that ought to be *nuff ced,* for to any intelligent man, with any knowledge of the tuberculosis situation at all, that brief statement ought to reveal, at one glance, the

crying need of the hour in the tuberculosis problem, and the shrewd insight and practical experience with which Doctor Palmer's institution has met the need.

The Springfield Open Air Colony is neither a charitable organization nor a commercial enterprise, but a self-supporting, self-respecting sanatorium, where the patient of moderate means, without mortgaging his home or stripping himself bare, and without surrendering the self-respect that pertains to paying one's way, may obtain the best that modern science has to offer in the way of organized, intelligent help, offensive and defensive, against the disease that he is fighting. I do not know what better, what more splendidly useful work one could do than this.

I positively envy my friend Palmer his genuine helpfulness and achievement. I wish I could bring every physician within reach of my voice to understand and appreciate his work, and thus turn toward it a big tide of sympathy and support which would make his heart warm and his hands strong. And I wish I could do something to spread the advantages of the Colony among those who need them. I know that Doctor Palmer will be only too glad to answer any questions you may want to ask about his Colony and its work. If you have not already received one, write and ask him for a copy of his illustrated pamphlet, which will tell you in detail the things of which I have merely hinted at the spirit and inspiration.

DOCTOR STEELE'S APPOINTMENT

Dr. D. A. K. Steele has been appointed Senior Dean and Head of the Department of Surgery in the College of Medicine of the University of Illinois, a tribute to his efforts in supporting and upbuilding the College for more than thirty years.

PSEUDOCYESIS AND ECTOPIC PREGNANCY

The patient, a woman 38 years of age, became pregnant when 20, her baby dying, at six months, of infantile cholera. She is of Scotch descent, of a cheerful, and practical disposition, always has been healthy and well, although suffering occasionally from headache (possibly autotoxemic); her menses always have been regular, without pain, the flow lasting four or five days; has no leucorrheal discharge. She married in May, 1913, missed the July period, had a "show" in August, a regular period, with profuse flow lasting three days, in September, again in October for five days, in November for two days, then none until March 8, when there was a slight flow for a day.

There was mild "morning sickness" in August, with pain in the breasts, the latter enlarging gradually. The abdomen increased in size as in normal pregnancy, with sensations of fetal movements observed in the middle of the fourth month and continuing to full term, although never pronounced. At the beginning of ninth month, the abdomen changed its contour and the patient looked as if she were approaching full term. The hips enlarged and the abdominal wall thickened with fat deposit. The uterus could not be outlined nor was a fetus felt at any time. The cervix was hard, not patulous. In March, the patient experienced slight pains in her left side, radiating to the front and through to the sacrum; expected labor on March 26, but pains did not commence until March 30, when there set in a profuse flow, bright-red, with decidual shreds in the discharge. She felt a tenderness in her left side.

Vaginal examination disclosed a hard, nonpatulous cervix, with a hard mass to the left of the uterus. Bimanual examination disclosed nothing, the fatty abdominal wall preventing outlining the uterus. Under chloroform anesthesia, the uterus was found slightly increased in size, the mass at the left was diagnosed as ectopic pregnancy at about the sixth week, with rupture into the broad ligament. Operation was advised.

The patient was removed to the hospital April 2 and operated upon April 3, when the diagnosis was confirmed. The abdominal wall was very thick, the right tube and ovary were normal, left ovary atrophied, left tube thickened, rupture at the fimbriated end and extravasated blood in the broad ligament.

The patient was given one full-strength H-M-C tablet hypodermically before operation; experienced very little pain, and did not vomit until the second night after operation. Vomiting increased, with expulsion of dark-brown vomitus. Excessive tympany, with severe gas-pains and reverse peristalsis, made the next six weeks almost unendurable; then repeated enemata brought relief. Pituitrin was given freely and may have had some effect in restoring tone to the intestinal muscles.

A free bowel movement was obtained on the eighth day. The abdominal wound began to discharge freely on the same day, with appearance of sloughing and separation of

the edges. In the fourth week, the wound was healthy, without discharging, granulating nicely.

The temperature was normal for four days, never above 101 degrees at any time. The pulse was rapid and of low tension for two weeks, gradually returning to normal.

RUSSELL J. SMITH.

Bancroft, Ida.

A REMEDY FOR STOMATITIS AND A CLUE TO PELLAGRA

I am not sure that the following thoughts are worthy of much consideration, but possibly there may be something of value in them and thus I write to you in that attitude of mind.

By considerable experience, I have found out that the most severe and intractable cases of stomatitis (canker in the mouth) readily yield to an alkali (sodium bicarbonate) held in the mouth for a few minutes and then swallowed. We know also that soda is of great benefit in gastrointestinal catarrh. We know that soda is very beneficial in all forms of acidemia, and we know that acidemia often produces skin lesions, gastroenteritis, stomatitis, mental disturbances, and other symptoms, which are frequently aggravated during certain seasons and temperatures. It is very pronounced in children under 12 years of age, owing to the active metabolism going on.

These facts have led me to inquire whether it is possible that we might have here a clue to the cause and cure of pellagra? I have had no chance to treat a case of pellagra, but have thought, in view of the present uncertainty among doctors regarding treatment, that your readers might think it worth while to try it in their cases. Doses of a level teaspoonful in water three times daily should be given.

A recent bulletin of the U. S. Public Health Service states that the arsenical treatment is without effect, but we hear from numerous other sources of benefit derived from the administration of cacodylate of sodium. May it not be the alkalinity of the cacodylate which does the good, instead of the arsenic? The same bulletin declares that in an orphanage at Jackson, Mississippi, practically all of the patients (32 per cent) were between the ages of 6 and 12 years, just the time when acidemia is most pronounced in children.

The author of that report is a strong advocate of the dietary theory, but states that there is very little support for the infectious theory.

I ask your charitable indulgence with my baby idea.

C. D. FAIRBANKS.

Brownsville, Tex.

[We all appreciate Doctor Fairbanks' suggestion, and the editor hopes that some of our good friends in the south, who see many of these cases, will comment upon it—better yet, try it out. True, others have broached the idea that there is an acid intoxication in pellagra. Thus, our good friend, Doctor Pixley, was long of the opinion that it was primarily due to the presence of rancid, acid-producing fats in the intestinal canal.

On page 1100 of this number of CLINICAL MEDICINE we publish an extended abstract of Goldberger's articles on pellagra, the original of which appeared in Public Health Reports. These are the articles to which Doctor Fairbanks refers. They are of exceeding importance, and we urge everyone to read them carefully. However, while we believe that proper diet will help the unfortunate pellagrin, we do not feel inclined to stop there. We know that great benefit follows the use of the intestinal antiseptics. We know that cases are cured by calcium sulphide—and Isadore Dyer reports 100 per cent of cures with quinine hydrobromide! With such results, the doctor who would "throw physic to the dogs," in treating these poor people, would seem to be making a mistake—a very serious mistake.—ED.]

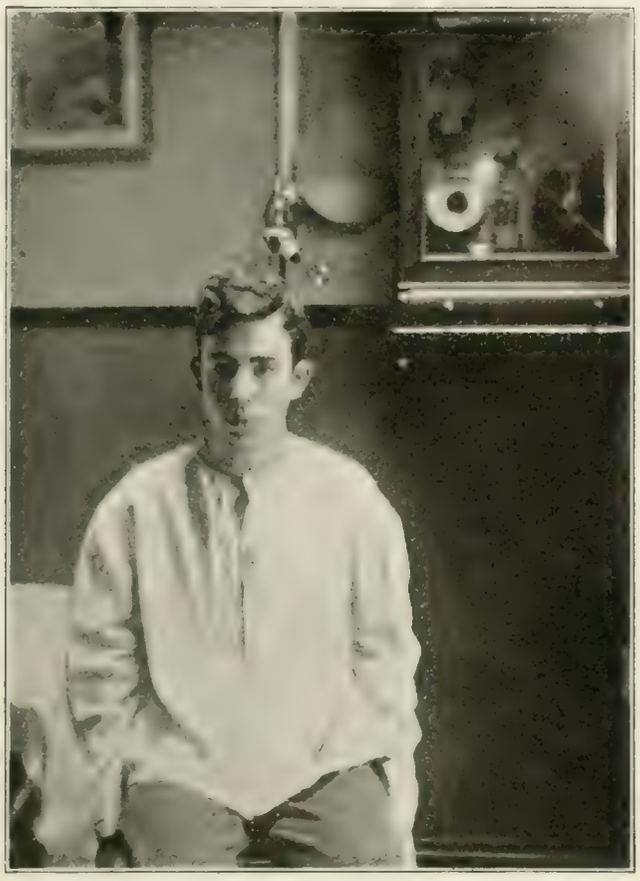
THE DIVIDED SACK—A GARMENT TO BE USED WHEN EXAMINING THE CHEST

"The writer has for many years examined all patients stript to the waist."—Charles L. Minor, in "Tuberculosis": Klebs, p. 304.

Exposure of the body to the waist may not be unsightly, but it seems inelegant and unnecessary, and sensitive women often object. For several years past, I have been using the divided sack on my patients, when making examinations, and have found it perfectly satisfactory.

Doctor Minor speaks of retiring from the room to give the patient a chance to disrobe. If the sack is used this is unnecessary. A square yard of space behind the door can

be curtained off, and specially lighted. This place should be provided with a stool, a clothes rack, mirror, and a pin cushion with assorted pins—plain, glass-headed, and several sizes of safety pins. If space permitted,



Front view of sack

I should enlarge the dressing room and put in a well-appointed princess-dresser with a long, wide glass. A happy surprise will come to the physician who has never used such a room, upon seeing how much his patients appreciate it.

The sacks themselves are very simple. I use six of them; two small, two medium, and two of large size, and each one has a different color. They are made of the best grade of outing cloth, which wears well, has a pleasing appearance, and is agreeable and comfortable to the body. The sleeves are full, admitting of free examination of the arms to the shoulders. Opening the top button, front and back, exposes the neck and shoulders.

The entire front or back of the chest may be examined without causing the patient any anxiety regarding exposure. The patient's body is protected throughout the entire examination. Large pearl buttons are used for appearance's sake and ease of opening and closing. Figures 1 and 2 show the appearance of the sack in use.

I provide a long kimono with waist part opened like the divided sack. This permits the patient to remove all the outer clothing, and come to the examination-stool unhampered and unembarrassed. Also, a patient thus protected feels perfectly comfortable in the presence of an assistant.

ELMER C. FAHRNEY.

Hagerstown, Md.

[Doctor Fahrney has sent us drawings showing exactly how the divided sack is to be made, and giving the exact measurements desired by the garment-maker. We have no doubt he will mail these to any physician,

Rear view of sack

providing stamps are sent for postage and trouble incurred. The idea is an excellent one.—ED.]

THE ELIMINATION OF LICE

During the last year, I have read several articles in CLINICAL MEDICINE regarding lice and their destruction. Here is my remedy.

All lice look alike to gasoline. This simple substance, procurable at almost any grocery store, will kill Mr. and Mrs. Louse and their whole family, no matter what

part of the body they infest. Give the gasoline a trial, Brethren.

W. B. Dore.

Macon, Georgia.

[But warn your patients to take the treatment out of doors, at a safe distance from a gas-jet or kitchen-stove.—Ed.]

POISONOUS MUSHROOMS

In addition to what is said in the November number of Clinical Medicine, page 1007, on mushroom poisoning, I want to add a word as to recognition of species.

All the species of amanita have a ring round the upper part of the stem and a cup, or volva, at the base of the stem. In *amanita phalloides* the cup is very distinct, but in *amanita muscaria* it looks like several cups, or layers. The top of the pileus is pale yellow, covered with distinct warts an eighth of an inch or more in diameter. All the species of amanita are white underneath the pileus.

By noticing these points no one need gather any of the amanitas to eat. While some of the species of amanita are reported as nonpoisonous, it is well to avoid all of them.

G. H. French.

Carbondale, Ill.

[It is well to repeat the therapeutic and diagnostic advice given in the article to which Professor French refers. If symptoms appear early, then muscaria poisoning may be suspected, and for this, atropine is the indicated remedy. If the appearance of the symptoms is delayed (36 to 48 hours), then treatment must be symptomatic, special attention being given to excretion.—Ed.]

SOME INTERESTING GELSEMININE SUGGESTIONS

In answer to your request for personal experiences in the use of gelseminine, in the November issue of Clinical Medicine, herein are given a few typical cases in which the remedy was given according to its indications. These indications are as follows: Determination of blood to the head, causing flushed faces, bright eyes, contracted pupils, restlessness and excitation. It is a remedy for sthenic conditions, and is contraindicated in asthenia. It is a remedy for acute inflammations in children, and for spasmodic affections. In infantile convulsions, colic, headache, torticollis, restlessness with fever, coryza, reflex disturbances of dentition, I have always found it of great service; and fever, restlessness, and pain, if present, are relieved in a remarkable degree.

It is a constant ingredient in my prescriptions for a commencing cold, giving relief promptly. Hypodermatically administered, it often relieves pain as well as morphine. Its great field of action, however, is in the regions supplied by the cerebral and upper spinal nerves, and in neuralgic and spasmodic affections of the head and neck.

A baby, ill with pneumonia, in the second week developed contractures of the muscles of the arms and legs, feet and hands, with slight opisthotonos. A few doses of gelseminine, given in solution, caused complete relaxation, and the remedy was stopped, with no return of the symptoms.

In rigid os, with thin knife-edge openings, three granules, repeated every fifteen minutes for three or four doses, will produce relaxation. This has been my experience in many such cases.

A man with acute retention of urine, due to cold, was given a hypodermic of three granules. Here there was acute spasm, and relaxation was prompt.

We often meet with cases of fever in children, with flushed faces, great restlessness, and jerking of muscles, in which gelseminine is directly indicated and the response to it rapid. It may be that this condition is present in the exanthemata, or acute inflammations, or in the troubles of dentition, or in intestinal derangements, or as a result of injuries, but, wherever found, the indications are met by gelseminine.

I have used gelseminine in ovarian diseases where spasmodic pain was complained of, in dysmenorrhea of the congestive type, in backache of the menstrual period, here often in conjunction with macrotoid, and as a hypodermic remedy in pain following laparotomy, instead of the morphine asked for, and in none of these cases have I ever been disappointed.

I esteem this remedy as one of the most important of all the antispasmodic drugs in any emergency case.

R. J. Smith.

Bancroft, Idaho.

[This is an interesting report—one of many which we hope to receive, the balance in time for publication in our big January

issue. Remember, our friend Doctor Shaller is very anxious to see full reports from all parts of the field. What do *you* know about gelseminine, Doctor?—Ed.]

STILL ANOTHER PELLAGRA THEORY

It is with regret and surprise that I read an article in the November issue of Clinical Medicine which has an uncertain sound with reference to the cause and treatment of pellagra. This is not up to date enough for *our* journal by at least a year. In May, 1913, Alessandrini and Scala, of Rome, announced the cause and specific treatment of pellagra. Alessandrini sent me his monographs, and I am enclosing a brief resume of their conclusions. They are very definite and exact, and should be a boon to American physicians. They are as follows:

The Cause of Pellagra

1. Pellagra is a chronic intoxication caused by the presence of colloidal silica in drinking water.
2. Pellagra is a disease strictly localized and contracted in districts where the water supply is in contact with an argillaceous terrain.
3. Colloidal silica makes irreversible and insoluble compounds with the proteid substance of the tissue cells.
4. This combination abstracts water from the tissues, the resulting drying giving rise to cutaneous manifestations and digestive and nervous disturbances, the classical triad of pellagra.
5. The acid intoxication is concentrated by evaporation, hence the cutaneous manifestations on the face, neck and hands.
6. Pellagra is not affected by maize alimentation.
7. Pellagra is not due to filaria.
8. Pellagra is not communicated by the simulium fly.
9. Pellagra is not a parasitic disease.

Prevention and Treatment

1. Pellagra is prevented by treating water supplies and reservoirs with broken limestone.
2. The essential treatment of pellagra is alkaline.
3. Inject intramuscularly in the gluteal region 1 Cc. of a 10 percent solution of trisodic citrate, daily at first, later at longer intervals.
4. Treatment of the ordinary case will take from one to two months; the number of injections will be about one-half the number of days under treatment.
5. This treatment will cure pellagra without change of diet, domicile, occupation, or sanitary environment.

E. M. Perdue.

Kansas City, Mo.

[Clinical Medicine not up to date! That touches us "in the quick." In matters of therapy we try to be the most up to date medical journal published. However, we will confess to being somewhat less familiar with Italian literature than we are with the German, French, English, and American. So we thank Doctor Perdue for this reminder.

As we have stated in the comment upon Doctor Fairbanks' article in this number, others have suggested the value of alkaline treatment in pellagra, though for reasons somewhat different from those proposed by Alessandrini and Scala. Perhaps the hypothesis presented by these gentlemen is sound and will stand the test of close criticism, yet we confess that it seems to us assailable. For instance, the disease is undoubtedly greatly on the increase in the South.

If pellagra were due to the water supply only, then the incidence should not vary much from year to year. Also, Goldberger has shown that while the inmates of the public institutions in the South suffer greatly from pellagra, the employes of these institutions escape entirely—and they certainly drink water from the same sources. Read the abstract of Goldberger's article and an editorial on pellagra, both published in this issue.—Ed.]

THE RED-CROSS CHRISTMAS SEALS

Every doctor should encourage his patients and friends to buy generously of the Red Cross Christmas Seals, which will be offered for sale, upon November 30, throughout the Nation. These seals should be affixed to all Christmas letters and Christmas gifts. The income derived from their sale will be used, as in previous years, in the great nation-wide fight against tuberculosis. Every dollar spent in this way may help to save someone's life. Buy generously yourself and encourage others to go and do likewise.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

NO therapeutic measure has been so quickly accepted by the mass of the medical profession as vaccine therapy. In the beginning, the vaccines used were autogenous, or personal, and were prepared, as a rule, by skilled bacteriologists, who either personally administered the vaccine or instructed the attending physician how to give it. It was but a step to commercialize vaccine therapy; and it was not long before mixed stock vaccines were put on the market, so that it is a common thing for doctors in remote country districts, as well as in our large cities, to have in their office or medicine-bag a syringe and a supply of commercial stock vaccines warranted to cure every disease "that flesh is heir to."

We once deplored polypharmacy; but the fantastic and heterogeneous composition of many commercialized stock vaccines recommended for "mixed infections" would make the old polypharmic Warburg's tincture look like simplicity simplified.

Stock vaccines may contain but one variety of bacteria, in which case they are called single, or they may contain innumerable varieties, hence are called mixed vaccines. A stock vaccine is made in bulk and afterward subdivided for proper dosage. I quote from the "Practical Medicine Series," Volume VI, 1913:

"The very frequent failure to obtain satisfactory therapeutic results with stock vaccines of a single species, race, group or strain prompted the production of those called polyvalent vaccines. Like mixed vaccines, they represent an effort to hit a minute and possibly uncertain target with a widely spreading charge of therapeutic ammunition. There are no satisfactory data to prove the superiority of any of the numerous kinds of polyvalent stock vaccines over the corresponding ones of a single source. They serve simply to complicate vaccine therapy and to engender a false sense of security on the part of the physicians using them.

"Objectionable mixed stock vaccines include practically all the mixed vaccines now on the market. They are not even corresponding in a sense that a preliminary bacteriologic diagnosis has established the identity of the bacterial species involved in the mixed infection under treatment. For the most part, they are to be used by the unscientific procedure of guesswork. The physician is expected to assume that two or more pathogenic bacteria contained in the mixed stock vaccine are the active agents in the case which he is treating. Having reached this assumption, he discharges into his patient a mixture of bacteria including the ones whose presence is suspected, and several others; for these mixed vaccines are generally very liberal as to bacterial species entering into their composition."

Autogenous vaccines are the agents *par excellence* of vaccine therapy. They are made from bacteria taken from the patient in whose treatment they are to be used. They usually are simple, being derived from a pure culture of a single causative organism isolated from the affected tissues. In using autogenous vaccines, a correct bacteriological diagnosis is a prerequisite.

It is not always possible to secure an autogenous vaccine, and in such cases, where the physician is sure of the character of the infection, he is perfectly justified, notwithstanding what is stated in the above quotation, in employing a reliable commercial vaccine of a single species. I am not partial to mixed vaccines.

In my work at Mudlavia, I prefer to use autogenous vaccines prepared in our laboratory, when we can do so; but I have had good success with good stock bacterins in the following classes of cases:

Acne treated with a stock vaccine made from the acne bacillus will almost invariably be cured. I give from thirty to one-

hundred millions at a dose, according to the character of the disease. The treatment may have to be continued for several months.

Gonorrheal vaccine has proved of value in my hands in a great many cases. It is especially of value in gonorrheal arthritis.

In whooping-cough, pertussis vaccine is of unquestioned benefit. And in cases of chronic rheumatism, arthritis deformans, and neuritis, I very often get good results with vaccine therapy.

Stock vaccines are useful, but they should be of that organism that has the fewest number of strains. Mixed vaccines, if used at all, are to be employed only when a mixed infection has been bacteriologically proved to be present or if tangible evidence is at hand to lead one to suspect its presence.

In bacterial infections, the stimulus is the specific organism or its toxin; tissue-cells react to this stimulus by producing specific antibodies; the larger the amount of specific antibodies the cell is made to produce by a vaccine, the greater is its therapeutic efficiency. If, however, instead of reacting to the specific organism alone, the cell is called upon to divide its reacting capacity in the production of antibodies to two, four, six or even more varieties of organisms, the ability of the cell to manufacture the specific antibody is reduced, at least in direct proportion to the number of nonspecific organisms contained in the vaccine. If the principles upon which the use of vaccines depends are to be observed, it manifestly is illogical and, to say the least, bad therapeutics, to employ this agent in a manner diametrically opposed to its basic principles.

In *The New York Medical Journal* for July 19, 1914, Dr. Alfred C. Reed, of Changsha, China, has a very interesting article on alkaloids. He writes in part:

"There is a wholesome tendency in approved therapeutic practice to discard drugs whose exhibition can not be justified by a definite physiological indication. This inclination parallels the equally good habit of monopharmacal prescribing, especially in the use of potent drugs. If an occasion requires the employment of two or more powerful drugs, their separate administration makes the control of each easier and more accurate than that of their admixture. Just so is there a constant effort to reduce all remedial measures, especially drugs, to their simplest terms, in the interest of accurate doses, undivided action, and more powerful effect. Thus, Leonard Rogers has rendered distinguished service by replacing ipecac by emetine in the treatment of amebic dysentery. Emetine is among the most recent additions to the effective armamentarium of alkaloids."

You can not keep a good thing down, although the old conservative has clung to the galenicals until medical progress has forced him to use the active principles. Active-principle therapy is rational, scientific, and easy. Why not use more of the active principles? You will not regret it when you once learn how to use them properly.

I am convinced that physicians are making a mistake in abandoning the use of drugs, especially the active principles, and substituting for them many of these new therapeutic fads.

It has been my experience (and I believe it has been the experience of many other physicians) that, after trying vaccines, radium, mental healing, and the "hundred and one" new methods of treatment for certain conditions, I have been compelled to return to the good, old, tried drugs, like digitalin, aconitine, veratrine, colchicine, strychnine, ergot, quinine, morphine, chloral hydrate, aloes, rhubarb, castor-oil, and so forth—you know them all. They have been good, reliable friends of yours in many a serious experience, so, why give them up for things not yet thoroughly tried out? When you have a really sick patient, remember the old saying, "Don't swap horses in the middle of a stream," especially when you have a good horse (or drug) that has carried you safely over many a turbulent stream before.

We have mastered the art of work in the United States to perfection. Our modern, up-to-date giant factories are 1000 percent efficient, as compared with the more antiquated methods of industry followed in many of the countries in the old world. The next thing we must master is, the art of play. We must learn to relax from our stress and tension more frequently than we do, for we are a tired nation, perhaps the most tired nation on earth. There is danger ahead if we do not.

The evils of our intensive life, of our restlessness and never ceasing activity, are

already beginning to manifest themselves on a national scale. We are becoming dancing-crazy, not from sheer frivolity, but from overstrain. The tango has become an obsession with us, because we have too long stifled the instinct for play, because we are the most weary nation on earth. Some of us manage to escape neurasthenia, but there are few men in the United States who are free from chronic or acute fatigue.

We are breaking down mentally and morally, as well as physically, because we have no room for adequate relaxation in our scheme of living. The "epidemics of immorality" which break out in many small towns that have always been considered models of propriety are simply a reaction resulting from the "moral fatigue" which we have allowed to accumulate in our social system, without doing anything to relieve it.

We need to relax the mind as well as the body. We need to listen to lectures. We need to read novels. We need more of a social life in this country, for all the people. We need more frequent mingling with our fellows. We need more art in our daily life, and more culture. At present our life is bare of either or all these activities. All of which can be summed up in one word—leisure. We need more leisure.

As the lamented Dr. I. N. Love used to say: "Eat less and play more. Indulge in less fret and fume and in more fruit and fun."

It may be news to the layman, as it will be a surprise to many mental healers and disciples of the New Thought, to learn that few, if any, books of distinction on the subject of medical therapeutics nowadays are published without containing much in favor of psychotherapy. In the middle years of the last century, when a method of treating bodily disease through the mind made its appearance in this country, in Portland, Maine, it was supposed to be an entirely new departure (though it was not), and an exceedingly absurd one, and almost immediately was being savagely torn from limb to limb by people and physicians alike—only it would not remain torn, but, like the crustacean it was believed to be, insisted upon growing a fresh claw in place of every one wrested away. In fact, a chief result of these attacks seemed to consist in an advertising and accentuation of the excellencies of the newcomer that greatly aided to keep it alive.

But it was noticeable even in those early days that the antagonism to the "mind-cure fallacy" never emanated from the most able physicians or the most learned among the laymen. Ambroise Paré, the famous Paris physician, added to the age-old "*vis medicatrix naturae*" another aphorism, namely, "We amuse the patient while nature performs the cure," and thus gave evidence of what the attitude of really cultivated physicians must be toward real mind-healing; for, it would scarcely be too much to say that this able physician's statement might stand for one of the pillars upholding the base on which modern psychotherapy rests.

One of the most important aims of the psychotherapeutist is, to remove such obstacles as may stand in nature's way, so that it may work unhampered; and he does this by means of suggestion. Moreover, it is well known by all properly instructed physicians that this principle of psychic influence as it is called, this instillation, by the doctor into the patient, of faith, hope, joy, peace of mind, by whatever means he might, has been employed, and with gratifying results, by every practicing physician since the days of Aristotle, the first physiologist.

I never have known a really intelligent and learned physician to refute the claims of psychotherapy, except as in the mouths of some of its irresponsible advocates it became imbecility. On the other hand, I never have known a really cultivated and learned psychotherapeutist to refute the claims of medicine in its place. In short, the enmity which often seems to exist between the two professions really exists only between certain disciples of each, and not between the professions at all; for, as we shall see, the two, when once we know them both, become complementary the one to the other, each giving a strong and an able hand at need to its brother.

Some persons (for nowadays it is always the person, not the disease, that is treated, both by medicine and psychotherapy) would be no more amenable to psychic influence in the desired direction than would a stone, while they might respond favorably to a right drug. And it is so conversely. A given patient may either be injured or remain unaffected by a drug that would heal another, yet, will respond favorably to right suggestion. Others require both medicine and suggestion.

Among the Books

RUTTIN: "THE LABYRINTH"

Diseases of the Labyrinth. By Dr. Erich Ruttin, of the University of Vienna. Foreword by Prof. Victor Urbantschitsch. Authorized Translation by Horace Newhart, A. B., M. D. With 25 figures. New York: The Rebman Company. 1914. Price $2.00.

It is really remarkable that the ear should have been for so many years the field of special practice without stimulating any special research, and that otologists should, for so long, have busied themselves at the very door of so important a structure as the labyrinth without attempting to explore it. Yet, this is virtually the history of the labyrinth until very recently. It is only within the last few years that any systematic work has been done upon this important organ; and even now our knowledge of the labyrinth and its functions is exceedingly crude and meagre.

Of those who have contributed to this knowledge, and are still contributing to it, none is more conspicuously entitled to our gratitude than is Doctor Ruttin. American otologists have followed his work in Vienna with intense interest, and it is not surprising that they should have demanded a translated edition of his monograph giving his own story of his investigations.

The profession of this country is highly indebted to The Rebman Company for the presentation of this translation, ably done by Doctor Newhart. It is not to be expected that the sale of such a book will be very large; but it is a work that will be keenly appreciated by those to whom it appeals.

KELLY: "MEDICAL BOTANISTS"

Some American Medical Botanists. Commemorated in Our Botanical Nomenclature. By Howard A. Kelly, M. D., LL. D. Troy, N. Y.: The Southworth Company. 1914.

Just as every individual medical man who is worth his salt has a life of his own, outside the consulting-room and the hospital ward, where he touches elbows with other human beings and human interests, so also has medicine itself a history apart from the test tube and the microscope.

The medical family has included men who have done famous work in other directions. Some of the greatest botanists this country has ever produced, for instance, have been physicians, including the great Asa Gray. "How many are aware," pertinently inquires Doctor Kelly, "that the beautiful fragrant gardenia, universally worn by gentlemen at evening parties, is named after old Dr. Samuel Garden; that wistaria was named for Doctor Wistar, of Germantown; that claytonia, the spring beauty, is called after Doctor Clayton; that mitchella, the partridge-berry, is the namesake of Doctor Mitchell; or that one of the pitcher-plants is named for Doctor Darlington?"

Doctor Kelly knows and revels in these things, because for forty years he has loved and followed the study of botany, not alone for its scientific phases, but as a delightful outdoor hobby. In this book, he has gathered together a nosegay of these flowers, all named for medicine's fathers, and in our leisure moments he goes over them with us in a familiar and informal way, giving us a little of their human history, telling us a little about the noble dead whose hearts and lives they represent.

It is, indeed, a delightful book—would to heaven there were more such written, books that will take us out of our workshops occasionally and into God's sunlight and men's hearts. It should have a double influence: to make us familiar with the background of our profession and proud of it, and to stimulate our own interest in a beautiful and wholesome hobby.

CHOYCE: "SURGERY"

A System of Surgery. Edited by C. C. Choyce, B. Sc., M. D., F. R. C. S. In three volumes. Volume III. With 12 colored plates, 22 black-and-white plates, and 242 illustrations. New York: The Funk and Wagnalls Company. 1914.

The last of the three volumes of this series is devoted to the surgery of the cardiovascular, lymphatic, and nervous systems, the surgery of the respiratory tract, and the surgery of the bones. We already have paid our

respects to the character and desirability of this series, as a whole. We thoroughly believe in concise, comprehensive systems of surgery (and of medicine, too) of this kind, and are glad to see that they seem to be coming into fashion again in place of the long-drawn-out 8- and 10-volume works that have been the vogue during the last ten or twelve years—at least in this country. In England, they do not think the condensed manual has ever lost its place.

In these three volumes will be found all that is necessary for the general surgeon. Every chapter in the last volume, as in the first one is, to the point, lucid, practical, helpful. The practitioner who is obliged, as all practitioners needs are, to do a large amount of his own surgery, will find the book ample for his general requirements.

CRILE AND LOWER: "ANOCI-ASSOCIATION"

Anoci-Association. By Geo. W. Crile, M. D., Professor of Surgery, Western Reserve University, and William E. Lower M. D., Associate Professor of Genito-Urinary Surgery, Western Reserve University. Edited by Amy E. Rowland. Philadelphia and London: W. B. Saunders Company, 1914. Price $3.00.

Whatever may be the ultimate signification of Crile's anoci-association doctrine in its relation to surgical shock, as set forth in this book, it has at least served one exceedingly useful and practical purpose, namely, it has called widespread attention to the esthetic and suggestive element in dealing with our surgical patients. For years we have inexcusably neglected this factor. We have made the avenues of their approach to us almost brutally shocking to their sensibilities. In view of the seriousness of the business upon which these patients come to us, they are in just the condition of mind to be influenced by apparently trivial things. Crile has given the lie to their apparent triviality, and has established the importance of the psychic element upon a purely scientific and materialistic—one had almost said, upon a cold-blooded—basis. And in this, if in nothing else, his experiments and doctrines have justified themselves.

This volume contains, in its first part, a statement of the kinetic theory of shock, and the principle of anoci-association, and in its second part, the application of this kinetic theory to the technique of surgical operations. However, the authors point out that each operator who accepts the fundamental principles must work out his practical application according to his own personal equation and to the environment in which he works.

BROWN: "THE JUNIOR NURSE"

The Junior Nurse. By Charlotte A. Brown R. N., Instructor in the Boston City Hospital; late Superintendent of the Hartford Hospital Training School, Hartford, Conn. Illustrated. Lea and Febiger, Philadelphia and New York. Price $1.50.

The author declares her purpose in the writing of this book to be the furnishing of a guide for the student nurse during the earlier months of her training. Whether there be a real demand for a separate teaching book for this period of a nurse's course, Miss Brown is doubtless more fitted to judge than we are. In any case, time and the event will show. But, even if they should decide against her in this respect, yet will her book, in our humble opinion, not have missed its mark; for, unless we are greatly mistaken, there are many senior nurses to whom it will prove of more practical and helpful value than many books on the subject which it has been our lot to review.

Clearness and simplicity are the keynotes of the book. The subject of bacteria is confined to a short chapter, in which information is given as to their growth, products, and distribution, together with the approved methods for their destruction. An equally brief and practical discussion is given of the subject of dietetics. The unsettled subjects of digestion, assimilation and metabolism are avoided, and a simple classification of diets, with their special application to various disease conditions and repair processes, is substituted. In brief, says the author, the object is to cover those topics which belong to the nurse's junior year, and to withhold those which she will better comprehend in her senior year. She might almost have said, to withhold those which the nurse never does understand, and does not need to understand.

COOKE: "DISEASES OF THE RECTUM"

Diseases of the Rectum and Anus. Edited by A. B Cooke, A. M., M. D. With

215 illustrations in the Text and 21 Full-page Plates, 7 in Colors. Philadelphia: F. A. Davis Company. 1914. Price $5.50.

This work might almost be designated as The American Text Book of Proctology, since it represents the collated views and experiences of a representative group of American specialists in diseases of the rectum and anus. The editor-in-chief is, himself, not a specialist in these diseases, as he frankly confesses. He used to be, but later became interested in the broader field of general surgery. We are of opinion that this does not detract from, but rather adds to, his discriminative fitness for editing such a book as this.

The first sixteen chapters are from Doctor Cooke's own pen. The succeeding chapters are properly credited to their authors. Each author has been accorded perfect freedom in the preparation of his respective chapters; and this gives the book a certain flavor of individuality, which is not only pleasing, but has a distinct value. On the whole, it may be said that the volume represents the most authoritative teaching upon the subject of which it treats.

PROGRESSIVE MEDICINE

Progressive Medicine. A Quarterly Digest. Edited by Hobart Amory Hare M. D. Assisted by Leighton F. Appleman M. D. Volume XVI, Numbers 1, 2 and 3. Philadelphia and New York: Lea and Febiger. 1914. Price $6.00 per annum.

The March number contains a summary of the progress made in surgery of the head and neck and the thorax, infectious diseases, diseases of children, rhinology and laryngology, and otology. The June number is devoted to hernia, surgery of the abdomen, gynecology, diseases of the blood and of the metabolism, diseases of the gland and lymph system, and ophthalmology. The September number treats of diseases of the thorax and its viscera, including heart, lungs and vessels, dermatology and syphilis, obstetrics, and diseases of the nervous system.

A glance at this table of contents will convey to the interested reader an idea of the scope of this excellent digest. The editing is done, as usual, with judgment and discrimination, looking always to the practical, clinical value of the subjects in question to the man in the field. All that is new, and true, and useful finds a place in the summary. This is the threefold test. We really do not see how a doctor can afford not to afford the modest six dollars per annum which brings him such a rich treasure of current discoveries and advances in his chosen science.

EGGLESTON: "PRESCRIPTION WRITING"

Essentials of Prescription Writing. By Cary Eggleston M. D., Instructor in Pharmacology, Cornell University Medical College, New York. Philadelphia and London: W. B. Saunders Company. 1913. Price $1.00.

In some way or other this excellent little book has escaped our reviewing process until so late in the day that a review is now almost a superfluity. We regret the oversight, for we should like to have said at the outset of its career what we hasten to say now, that it is a most clear and concise presentation of the subject, such as will carry the student through it in a sequential manner, and prepare him to construct a grammatic and proper prescription to fill any requirement.

"The work," says the author, "is a crystallization of my experience in teaching the subject, and has been prepared with a view of reducing the burden of the already over-worked student." If the reviewer were to write for a week, he could not any better sum up the character and merit of the book. Even its physical make-up is calculated to reduce the student's burden, both materially and mentally; for it is such that he can easily carry it in his pocket and study it at odd moments, on the street car, for instance, yet bound in such fashion, withal, that it will not readily break or soil.

PRACTICAL MEDICINE SERIES

The Practical Medicine Series. Under the Editorial Charge of Charles L. Mix, A. M., M. D. Volume I. Series 1914. General Medicine. Edited by Frank Billings, M. S., M. D., and J. H. Salisbury, A. M., M. D. Chicago: The Year Book Publishers. Price $1.50.

As would naturally be expected, the largest section of the volume is devoted to a resume of the advances made in biologic medicine and the processes of immunity against bacterial and protozoan infections.

A specially large amount of space is given to a review of tuberculosis and its therapy. Almost equal importance is given to the heart and its collateral organs and functions, which have been the subject of considerable investigation and experimentation in the past year. Diseases of the blood and the blood-making organs come in for a fair share of attention, followed, as a close second, by diseases of metabolism.

These four topics constitute by far the greater scope of research work in medicine during the period covered by the volume, and they all find full representation An exceedingly interesting section is the one which deals with the functions and diseases of the ductless glands.

WALKER: "GENITOURINARY DISEASES"

Surgical Diseases and Injuries of the Genitourinary Organs. By J. W. Thomson Walker, M. B., C. M. (Edin.), F. R. C. S. (Eng.), Hunterian Professor of Surgery and Pathology, Royal College of Surgeons, England. With 24 Color and 21 Black-and-White Plates, and 279 Illustrations in the Text. New York: Funk and Wagnalls Company. 1914. Price $7.00.

The subject is treated entirely from the point of view of the surgeon; not even from that of the genitourinary surgeon, but of the general surgeon; which, I think, gives it an added value to the average reader. A still more important value is derived from the personal note which so clearly characterizes it from beginning to end. "In writing these pages," says the author, in his preface, "I have drawn largely on my own experience, and have referred to many personal cases." In a man of limited experience and untried judgment, of course, that would be matter for apology. But in an author of Dr. Walker's large experience and ripe judgment it is a matter for congratulation to the reader. That is precisely what we want, when such a man writes a book—to sit at his feet and learn of him, as we should if we were privileged to attend his lectures and his clinics.

The author states that he carefully considered the claims of a pathological, as opposed to an anatomical, classification of diseases, but decided in favor of the anatomical, because the work lays no claim to be a purely scientific treatise, but is designed to serve as an aid to clinical work, and anatomical classification is subject to less obscurity than pathological. None the less, the author bluntly declares that he has no sympathy with those who would slur over the pathological science, and give undue prominence to the art of genitourinary surgery. He believes it is impossible to carry out good surgical work on a superficial knowledge of the pathological conditions with which the surgeon has to deal. The pathology given in his book is living pathology—the pathology met with by the surgeon in the operating theatre, and of vital importance to proper treatment.

PRACTICAL MEDICINE SERIES

The Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Edited by Charles L. Mix, A. M., M. D. Volume III, Series 1914. The Eye, Ear, Nose and Throat. Edited by Casey A. Wood, Albert H. Andrews, and William L. Ballenger. Chicago: The Year-Book Publishers. Price $1.50.

During the past year, remarks one of the editors, the ever-interesting subject of glaucoma and its treatment has attracted much attention. In consequence, a corresponding amount of new literature was published in connection with the subject. There can be no doubt, he thinks, that trephining and its allied procedures, especially the sclerotomy of Lagrange, constituted a decided advance in the relief and cure of glaucoma, especially of the chronic forms, and some space is given in this volume to the matter.

Both the Smith-Indian and the Homer Smith procedures in cataract operation are also given attention, although the editor avers that the relative merits of these operations in early adult immature cataract are still *sub judice*.

The conservation of vision, as everyone knows, has received a considerable impetus in the United States in the past year, and this is given representation in the volume.

Equal advancements have been achieved in the surgery of the ear and of the nose and throat, all of which are reflected with faithfulness and discrimination by the editors of these departments.

We again take advantage of the opportunity of commending this entire Practical Medicine Series. Next to a set of bound volumes of your favorite medical journal we know of nothing which presents the "latest-worthwhile" in a form so practical and usable.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6040.—"Milker's Cramp." Allow me to state that while yet a student in college I had under my observation a case similar to the one described in Query 6040. This occurred in a farmer thirty-four years of age who was milking from ten to eighteen cows twice daily. He was troubled with a sense of numbness in his fingers and hands, accompanied by a prickling sensation and dull ache, which became worse at night. The symptoms gradually became worse, until an uninterrupted night's sleep was seldom enjoyed. Medicinal and mechanical treatment of various kinds was tried, but with no effect. During haying and harvesting his symptoms were greatly exaggerated, no doubt owing to the fact that it was necessary for him to hold a fork-handle tightly in his grasp almost continuously. Upon my advice he bought a milking-machine, which did away with the supposed etiological factor of his trouble, and now, after about three months, he has completely recovered.

The purpose of my writing this is not because I think I have discovered anything new, but because it may suggest to the inquirer a means whereby he can aid his patient without material inconvenience to either. If we live by the practice of medicine, it is to our profit to keep our patients in such health that they can make the necessary wherewithall to pay doctors' bills.

W. B. FILLINGER.

Grand Ledge, Mich.

ANSWER TO QUERY 6040.—Milker's Cramp." I live in a dairy country and have had experience with this trouble. The only cure is to stop milking for all time. Several cases began again after all symptoms had subsided, but these men soon had to quit. Result, no further trouble. The symptoms described are typical. No treatment necessary, except massage for a time.

E. V. ANDERSON.

Woodstock, Ill.

Queries

QUERY 6047.—"Tremors." J. P., Wisconsin, sends the following laconic letter: "The patient, male, 25 years old. About one year ago tremor started in the right arm; now all over the body. My diagnosis is multiple sclerosis. Thinks overwork the cause. Please suggest treatment."

We regret to say that it is impossible to outline a treatment for your patient with the limited knowledge of basal pathological conditions you supply. It *may* be a case of multiple sclerosis. As you are aware, among adults, tremors are met with more frequently in women. In the earlier stages, it is difficult to differentiate between this and hysteria. The general symptoms are those found in all cases of the disease and not explicable from the position of the sclerosis. Again, certain symptoms depend upon locality of the lesions.

The first evidence of the disorder, as a rule, is loss of power, first in one, then in the other *lower* extremity; paresis of the upper extremity appears later. About this time other general symptoms appear; occasionally, they are observed very early in the disorder—tremors, nystagmus, scanning speech, optic-nerve atrophy, and increased reflexes.

It should be remembered that tremor is entirely volitional. When the patient is at rest no abnormal movement is manifested;

the tendon reflexes are increased, as stated, and Babinski's phenomenon may be present. Quite frequently a certain degree of ataxia or incoordination of motion exists, independent from the tremor. There is no wasting of the muscles; occasionally, however, areas of hyperesthesia about the extremities exist; not infrequently the patient complains of tingling or numbness of the limbs. After the disease has lasted some time, a positive diagnosis can be based upon the existence of intention-tremor, increased reflexes, mental deterioration, scanning speech.

The prognosis under such circumstances is very bad and no known remedies can be depended upon to produce favorable results. Arsenic iodide occasionally seems to make some impression. This writer, in one instance, secured temporary improvement by the use of lecithin and calx iodata. Silver iodide has recently been recommended. You may try in this case calx iodata, and lecithin, using the arsenates of iron, quinine, and strychnine, with nuclein, as an alternant. Elimination must be maintained and an easily assimilated dietary ordered. Rest is, of course, essential. If you will make a careful examination of your patient and give us a clear clinical picture we may be able to offer more definite suggestions.

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Query 6048.—"Wartlike Growth on the Scalp." A. A., Texas, tells of a patient who has a wartlike growth in the hair on his scalp, but he is opposed to the use of the knife. The irregular oval growth is about 1 inch in its longest direction, and 1-2 inch across, with an elevation of 1-4 inch. The base is somewhat constricted, and the body of cauliflower structure and freely movable. It has been coming on for many years.

We regret that you did not give us a clearer idea of the character of the wartlike growth. Under the circumstances, we hesitate to recommend either a dermal solvent or a dermal caustic.

The dermal caustic is particularly intended to destroy bloodfilled growths. Many of these socalled warts of cauliflower-like structure are bloodfilled. You do not state the color of the body of the growth. Is it pink, deep red or white? Does it bleed easily? How old is the patient? What treatment, if any, has been tried?

The dermal solvent (salicylic acid, lactic acid, and collodion) removes warts rapidly, but, as we have pointed out frequently, the treatment which will prove effective in one case may fail entirely in another.

As a matter of fact, there is a difference between the common warts so frequently seen on the hands and the papillomatous growths which appear on the head and other parts of the body. When observed in older people, the latter may be flat at the base, later assume a darker color and become slightly papillomatous or covered with a blackish, greasy scale. It is not always easy to differentiate such growths from slightly elevated moles; in fact, these may be clinically described as "warty moles."

Verruca digitata is a variety most commonly observed on the scalp. It is characterized, as a rule, by clefts or digitations extending nearly or quite down to the base. The surface is hard and horny; the lower portion is soft. They bleed readily, much more so than common warts. In size they vary from that of a split pea to a dime, and they are elevated one or more lines.

Perhaps the best treatment is, to apply a saturated alcoholic solution of salicylic acid once or twice daily, scraping away the softened debris from time to time. Lactic acid, applied scantily to several points several times daily, acts efficiently and without much irritation. An excellent plan is, to curette under ethyl-chloride anesthesia, then touch the base with pure carbolic acid or silver nitrate. Electrolysis may be used. This writer has secured excellent results with the high-frequency current (glass-point electrode).

We suggest that before instituting treatment you describe conditions fully, and we shall try to advise you more positively.

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Query 6049.—"Poisoning from Adulterated Liquors and Potassium Cyanide." M. C. R., Canada, submits a list of questions, herewith reproduced.

"Some time ago 10 Russian laborers purchased whisky at a small liquor store, which caused the death of 3, while the other 7 recovered. Analysis of some of the whisky showed it to contain wood-alcohol and also anisette. Please say what anisette is and from what source it is derived; give fatal dose, symptoms, and treatment; give also the symptoms it produces in nonfatal doses.

"This appears to be put into a cheap-grade of liquor for the purpose of giving the imbiber the feeling of a much higher percentage of liquors, thus giving a larger profit to the dealer who sells it. Does it

really produce such an effect? This affair is much discussed at present, and, as you know, the people expect the doctor to know everything. I should like to get some information about the matter.

"What other 'dope' is used in low-percentage cheap liquors to produce the effect of strong liquor; that is to produce intoxication in an equally quick manner?

"Give also fatal dose, symptoms, and usual duration of symptoms before death is produced from potassium cyanide, if taken in one dose by mouth, also treatment. Also state fatal dose, symptoms, duration of symptoms et cetera, provided the potassium cyanide is administered by the subcutaneous method.

"I have no book on toxicology and wish information regarding these, so that, should I be called upon to treat for either, I may be able to administer the best treatment, and at once."

We are not familiar with the methods of the manufacturers of cheap intoxicants. Cocculus indicus, as you may know, has been used by some brewers, and distillers have various trade formulas for producing imitation whisky and liquors. Anisette, the writer believes, is a solution of oil of anise in alcohol. Absinthe, as you know, is a distillate of wormwood (artemisia absinthium). In France a milder preparation is known as "anisette," which is consumed largely by women.

Absinthe affects the central nervous system, there being a striking resemblance between its toxic effects and a paroxysm of ideopathic epilepsy, twitching of the muscles of the face, clonic and tetanic spasms of the muscles of the trunk and extremities, profuse salivation, involuntary voiding of urine, followed by a period of unconsciousness. Absinthe (and presumably anisette) surpasses in perniciousness the more common beverages.

In fatal cases of absinthe poisoning there is abolishment of the reflexes, anuria, arrest of respiration and of cardiac action. Lavage of the stomach should be resorted to, even if the respiration, cardiac action and reflexes apparently are abolished.

Potassium-cyanide poisoning is evidenced by symptoms similar to those present in hydrocyanic-acid poisoning. The prompt administration of alkalis is advised to delay decomposition of the salt by the gastric juice. The stomach and intestinal canal should be evacuated, and arterial stimulants — ammonia, caffeine, coffee, et cetera — be administered. Cold affusions to the spine and friction of the extremities are indicated. The exhibition of 3 grains of potassium cyanide has killed. Unfortunately, death occurs very quickly in these cases, and help, to be effective, must be very quickly rendered.

In cases of potassium-cyanide or hydrocyanic-acid poisoning, the vomitus has a distinctive odor, and, as already pointed out, where a toxic dose is taken, death may occur in a few minutes. Sudden and complete insensibility occurs; the skin is cold and clammy, the extremities are relaxed, the respiration is slow and convulsive, pulse is feeble or imperceptible, face cyanosed. The symptoms caused by the injection of a solution of potassium cyanide would be similar to those which would follow the ingestion of the drug, but, of course, would manifest themselves very rapidly.

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QUERY 6050.—"Exophthalmic Goiter." P. F. C., Missouri, wants information regarding the symptoms and treatment of exophthalmic goiter, and asks: "Do we ever have goiter symptoms without any perceptible enlargement of the thyroid gland?"

It is a well-known fact that Graves's disease may be present in a patient who has neither exophthalmos nor goiter; the so-called "goiter-heart" being the result of thyroid excess, that is, a thyrotoxicated heart. On the other hand, the thyroid gland sometimes hypertrophies under circumstances which may be regarded as physiological, the enlargement disappearing as soon as the conditions with which they are associated pass away.

In this writer's opinion, the cases of Graves's disease in which both exophthalmos and goiter are absent are very few and far between. In the earlier stages, both may be present, but quite inconspicuous. The most invariable symptom probably is persistent tachycardia. When this is present in a patient in whom tubercle can be excluded, a very careful search should be made for other evidences of the disease.

It is a curious and interesting fact that even the subjects of definite thyroid insufficiency suffer from occasional outbursts of thyroid excess. An extremely interesting article upon this insufficiently understood subject appears in the "Practitioners' Encyclopedia of Medicine and Surgery," by J. Keoch Murphy.

QUERY 6051.—"Ear Noises in the Aged." R. D. B., Oregon, wants advice regarding a woman patient of 65, a very stout woman, who has lived in the West all her life and has broken in wild horses, buckled a pistol around her, taken her rifle, ridden the range, fought Indians, in fact, has been a "wonderful old girl," and her only trouble now is a constant roaring in her left ear and a terrible throbbing of the veins in the neck. Her heart is a bit weak, quite regular, but the sound is full and strong. When the noises in head are relieved she looks like a woman of 50, and says she is as well as ever in life. The doctor continues:

"I have given her nothing at all, but put her off till I hear from you. Can she be relieved of this noise, or not? Please tell if a cure can be had. She is of a very hardy, long-life race. Her mother is now living and is hearty and well at 104."

We very much regret that we cannot make any definite suggestions for your aged patient. It is more than likely that the roaring in the ear and congestion of veins are consequent upon an atheromatous condition of her arteries. Examine her carefully for hypertrophy of the heart, especially of the left ventricle. This condition manifests itself by increased apex beat, accentuated second aortic sounds, and increase of the limits of percussion of cardiac dulness.

It is hardly likely that you have to do with an aneurism of the arch, which, by pressure upon the left innominate vein, causes engorgement and edema in the region of the left side of the head and neck and not infrequently paralysis of the left vocal cord. Should this be the condition, you would find pulsation in the jugular fossa, marked dulness to the left of the sternum in the first intercostal space, inequality in the size of the pulse of the arteries of head and arm of one-half the body.

You do not state that any deterioration in the patient's hearing or otosclerosis has occurred. Roaring in the ear may be the source of great discomfort and may exist for many years; gradually, however, hearing is impaired and ultimately deafness becomes complete. Coincidentally the distressing factors cease.

In otosclerosis, tinnitus is referred to the head, and in chronic catarrhal otitis, the patient says the noise is distinctly in the ears. One ear is usually affected first, and later both of them. As a rule, the disorder progresses much more rapidly in the second ear than in the first one affected, while noises are much more noticeable after fatigue, mental or physical. As you speak of a marked throbbing of the veins in the neck (you do not say on which side) we are inclined to believe that serious sclerosis or other changes have occurred. Conditions may be more serious than you think.

Make a very thorough examination, state distinctly the character of the heart sounds, the rate and equality of the pulse. See whether you can detect any murmur at the base of the neck. The ear, of course, should be examined carefully with reflected light, and the condition of the tympanum determined. It might be well to take the blood pressure. Also you might send a specimen of her urine (4 ounces from the 24-hour output, stating total quantity voided) to a pathologist, for examination.

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QUERY 6052.—"Hemorrhage in Typhoid Fever." J. A. P., North Dakota, writes as follows:

"Do you find it advisable to stop the bowel movements in typhoid fever in case of hemorrhages? If so, when do you think you would stop the bowel movements? For how long a period is it advisable to have the evacuations checked? What, in your experience, have you found the best remedy for stopping bowel movements, and what do you give for again opening them? I have an epidemic of typhoid fever here and I would like to know what is the cost of examining the water of wells."

It is generally agreed that hemorrhage will not occur (or at least so rarely as to become a negligible quantity) if correct treatment is instituted and maintained throughout an attack of typhoid fever. This writer has been in active practice for a great many years, has treated several hundred cases of typhoid fever, and has had but one hemorrhage occur, and that patient died within twelve hours. Doctor Abbott, who in the early years of his practice covered a very extensive territory, had to contend with many cases of typhoid fever, and he has had a similar experience.

The old idea of giving morphine to confine the bowels was based upon an erroneous conception of the pathological condition.

It is well to remember that in certain parts of the country the character of the disease has changed somewhat during the past decade. In the South and East, ten or fifteen years ago, constipation was rarely ob-

served in typhoid patients; on the other hand, typical "pea-soup stools" were voided frequently. At the same time, practicians in the North and West reported constipation as being present in a very large proportion of their cases, and this condition is now very generally reported.

Hemorrhage is not likely to occur if free elimination is maintained and localized congestion relieved; but, where we are confronted with the condition, we should give atropine (hypodermically), a small dose of castor oil followed by a laxative saline, and then continue to give the sulphocarbolates and bismuth. Recently brilliant results have been obtained in intestinal hemorrhage by subcutaneous injections of emetine hydrochloride, ½ to 1 grain.

Of course, a severe hemorrhage occurring, as it does, when the patient's vitality is more or less exhausted is a very serious matter and every effort must be made to sustain the strength of the individual.

We must remember that the bowel lesions, even in very severe cases, may be trivial, and that the disease is really a septicemia, the bacillus having been found throughout the body. The physician whose conception of enteric fever is limited to an ulceration of Peyer's patches and solitary glands of the ileum can hardly institute effective therapeutic procedures. If thorough elimination and intestinal cleanliness is maintained and the natural forces of resistance are stimulated, we shall not have extensive ulceration of the lymphoid tissue.

Severe and persistent diarrhea, in this writer's estimation, is an evidence of extensive ulceration; and this condition, with meteorism, is most likely to occur in injudiciously dieted and treated patients.

It is necessary, of course, to exclude the hemorrhagic or toxic form of the disease. This is extremely rare and almost always fatal. In this variety, bleeding from the gums, nose and bowels occurs, and purpuric spots appear on the skin.

In these days, perforation is said to occur in about 3 percent. of all hospital cases. Frequent loss of small amounts of blood over several days is regarded as more serious than a single copious hemorrhage. In private practice, especially where modern methods of treatment are followed, hemorrhage, as we have already stated, is very rarely encountered.

Should you be unfortunate enough to be called to attend a patient having hemorrhages, do not attempt to give opiates or in any way limit the bowel movements. If there are profuse and frequent stools, the condition probably would yield (together with the hemorrhage) to the treatment outlined; that is, atropine or emetine, hypodermically, followed by the sulphocarbolates, and castor-oil, or laxative salines in small repeated doses. Bismuth may advantageously be added to the sulphocarbolates.

The patient must, of course, be very carefully dieted, also nuclein should be given, in 30-minim doses, twice daily.

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QUERY 6053. — "Alopecia, Neurasthenic Exhaustion." J. A. H., Massachusetts, writes:

"Will you kindly give me full directions for treating alopecia? The victim's hair is getting very thin on the top of his head. There is almost constant itching of the scalp and if scalp is combed too hard a scale soon appears, these scales being quite elevated and of good size. There is no fever or any constitutional poison from diseases—perhaps the blood and general health should be kept in mind always, but it seems that one should use a safe antiseptic lotion and also something that would promote growth of hair. Will you kindly map out full directions for me, as I have just finished a good trial of this formula, viz.:

Hydrarg. chlor. Cor	grs.	4
Euresol	drs.	2
Spir. formicarum	oz.	1
Olei ricini	drs.	2 1-2
Alcoholis, 70 percent	ozs.	8

"This, applied once a day, has not given any satisfaction. It stops the itching for a few days only.

"Also, what can you advise for a good, true nerve tonic—one that will be a 'nerve power' in every way—for a true neurasthenic; overwork, worry, nerve exhaustion, easily tired, fear, lonesomeness, etc., etc.?"

Alopecia often requires to be very carefully handled. The treatment which will prove efficacious in one case may fail in another. What about systemic conditions? Does your patient use tobacco or any alcoholic beverage to any extent? The following course, perhaps, will be as good as any we can suggest:

Wash the head thoroughly with a good tarry soap three times a week, then apply to the affected spots some of the sulphur-bearing shale derivatives (ichthyol, carbenzol, lignol are representative types), apply-

ing the fluid with a cotton swab and rubbing it in lightly. The next morning cleanse the spots with a little warm boric-acid solution, dry, and then apply the following lotion: Mercury bichloride, 5 grains; resorcin, 5 drams; boric-acid, 5 drams; glycerin, 4 fluid-ounces; alcohol, enough to make 8 ounces. Reapply this lotion at night, the soap and shale derivative being used only three times a week at first, then every third or fourth night.

If this procedure does not prove effective within a month or so, leave the scalp alone for two or three days, and then send two or three of the hairs plucked from the scalp itself, placed between two glass slides, to a pathologist for examination. You might with advantage prescribe the arsenates with nuclein, while at the same time making sure to maintain thorough elimination and watching the urine carefully.

The faradic current has proven most efficacious in this writer's hands. A most excellent formula is this: Tincture of cantharides, 2 drams; tincture of capsicum, 2 drams; castor-oil, 15 drops; oil of rose geranium, q. s.; alcohol, 8 ounces. Rub into the scalp at bedtime. We should alternate this with No. 2: Quinine bisulphate, 30 grains; tincture of myrrh, 4 drams; tincture of cantharides, 1 dram; bay rum to make 4 ounces.

Use the No. 1 for one week, then the No. 2 every other night for ten days, then return to the No. 1. Suppose you try these, after treating along the lines first suggested, for fourteen or fifteen days, or, if you desire to be quite sure of what you are doing, send the scraping first.

It might be well, also, to send a specimen of the urine (4 ounces from the 24-hour output, stating total quantity). Frequently there is a causative disorder of the body-chemistry.

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Query 6054.—Branchial Fistula." K. H. H., Virginia, reports the following:

"Woman, married, age 25 years, mother of one child; health fairly good. There is an opening in her neck on the right side, just above the notch in the collar-bone. The diameter of the opening is about the size of No. 60 or 70 thread. It was there at the birth, and emits some yellow fluid all the time. When the flow is on, it swells up and extends up the large artery. It is very tender to the jaw and gives her much pain, with a choking sensation, and runs inside of the throat. It has affected the right eye. If the opening gets stopped up, it will heal. It has healed twice or three times, but it still runs at times. Her record is clear of tainted blood, so far as I can ascertain. Her mother attributed it to a mark caused by a dog biting a cat on the throat, which caused an opening through which it breathed. What is it? What is the best treatment? Can someone give a name for it, and the cause?"

In this matter you have to do with a branchial fistula. This may be incomplete external, i. e., with an outer opening only, or complete—outer and inner openings. Such congenital fistulas do not always cause symptoms and may not be discovered until distention and irritation with mucous hyaline or mucopurulent discharge calls attention to them. They frequently escape attention up to adult life. After forming a permanent fistulous opening, they remain as cordlike or slightly indurated tracts leading inward. Their location is between the anterior borders of the sternomastoid muscles.

Median fistulas occupy the median position in front of the trachea and are remnants of the thyroglossal duct. Their location helps to distinguish them from other diseases causing fistulas, i. e., hytadid, lymphatic or retention-cyst sinuses.

The orifice of a branchial fistula is often a very minute point, difficult to see. Small round depressions with central conical orifices have been noted, but more often fissured orifices have valvular, lip-shaped outlets. The finest bristle-like probe or sound may be needed to detect them.

Almost always the insertion of a probe starts a spasmodic cough.

Treatment is unsatisfactory, partial removal leading to recurrence or cyst formation. Careful attention to drainage and cleansing may be followed by complete arrest of the discharge. The lumen, though not obliterated, shrinks so that little or no trouble is caused. Treatment by the injection of caustics proves a failure in most cases, and only the most skilful surgeon succeeds in extirpating these fistulas by an operation, though this, of course, remains the most scientific curative resource. For operative technic, see Keen's or other modern work on surgery.

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